MARCH, 1958

AMATEUR RADIO
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Co-axial Cable, 80 ohm, in 100 yard rolls. 1/9 yard or £7/10/0 per 100 yard roll.

Aust. Wavemeter, Type AWB1, high freq., 145-165 Mc. approx. Valve line-up: 958 diode, connected into two type 1N5s cascode connected. D.C. amp., complete with spare set of valves and 3" 0-1 Ma. meter. Circuit enclosed. Contained in flat grey metal carrying case. Packed ready for rail, £5/17/6

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Meters—0-100 Ma. 2" square, scaled 0-300, new £1
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Meters—0-20v., A.C. 2½" round type, new 25/-

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SCR522 Receivers, less valves £5

SCR522 Transmitters, less valves £5

BC733D Crystal Locked Receiver, tuning range 108-120 Mc. I.F. 6.9 Mc. Valve line-up: three 717As, two 12SG7s, one 12SH7, two 12SR7s, one 12SQ7, one 12A6. Also contains six miniature relays. Packed ready for rail. Gift at £5/17/6

108 Mark III. Portable Transceiver, complete with valves, less headphones, aerial and microphone £7/10/0

Co-ax Cable, 100 ohm, any length ..... 2/- yard

Co-ax Plugs and Sockets, American Ampenol ..... 5/- pair

Co-ax Right-Angle Plugs, American Ampenol ..... 2/6 each

Command Receiver Right-Hand Drives 2/6

Command Receiver Flexible Drives, 12 ft. long 10/-

LARGE STOCK OF CRYSTALS

915 Kc. and 455 Kc. Crystals ..... £3 each

3.5 Mc. Marker Crystals, latest miniature type complete with socket £2/10/-

Amateur Band Crystals, any frequency £2

Gold Plated Marker and Commercial Crystals, price on request. Delivery in seven days.

List of Crystal Frequencies appeared in last month's advert.

No. 19 Genemotors £2/10/0

No. 11 Genemotors, Low Power £2

No. 11 Genemotors, High Power 17/6

AR8 Vernier Dials, Low and High Frequency Bands, new 30/-

Calibrated Perspect Dials only 5/-

APX1 12v. and 24v. Shunt Motors, ideal for Small Beams. Works on A.C., new £1/10/0

APX1 Chassis, top deck, containing 28 Miniature Ceramic 7-pin Valve Sockets, Condensers, Resistors, etc., etc. A good buy at ..... £2/5/0; postage 5/- extra

Screwdriver Roll-up Kits, well known make. Contains three Standard, two Recessed Screwdrivers. Bargain 15/-

P.M.G. Key Switches, two-way 10/0

AR8/AT5 Cables, 12 ft. long 10/0

Type "S" Power Supply. 230 volt AC. Good condition. Personal Shoppers only £25

AT21 Power Supply, 230 volt AC. Good condition £25

Genemotors, Windcharger, 19v. 3.8 amp. input, output 405v. 0.095 amp. When 12v. input applied, 250v. output. £3/5/0

English Filter Chokes, small type, 40 Ma., 100 ohm resist. 3/6

MARCH — — — 1958
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MSS. and Magazine Correspondence should be forwarded to the Editor, "Amateur Radio," C.O.R. House, 191 Queen Street, Melbourne, C.1, on or before the 6th of each month.

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THE CONTENTS

AMATEUR RADIO

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C.O.R. House, 191 Queen Street,
Melbourne, C.1.

EDITORIAL

★

High Power and Component Parts

After the cessation of hostilities at the end of World War II. millions of pounds worth of surplus equipment became available on the disposals market—equipment which in normal times would be beyond the financial means of the average Amateur—and amongst this "gold mine" was equipment and components built to magnificent standards but in many cases well above the ratings required for the construction of Amateur phone and c.w. transmitters with the maximum input permitted to be used by the Australian Amateur.

No one can criticise the man who designs his equipment with a good margin of safety, indeed he is to be congratulated, not only for providing safety, voltage wise and insulation wise for himself, but for others who might come in contact with his equipment also. But the regulations governing the operation of Amateur stations did not provide for the use of such components particularly, which when used together could exceed the licensed maximum input, and the result was that many Amateurs who purchased this equipment were in trouble with Radio Inspectors from the Postmaster-General's Department who regularly inspect Amateur stations in accordance with the Wireless Telegraphy Act in the same way that commercial stations are inspected, and currently television stations also.

The Wireless Institute of Australia made representations on behalf of licensed Amateurs for a clear-cut policy on this matter and agreement was reached with the Wireless Branch of the Postmaster-General's Department that a combination of high power rating components could be used providing the licensed maximum input to the final stage of a transmitter could not be exceeded by other than a major modification to the installation. Despite this, there have been cases where Departmental Inspectors have continued to enforce the earlier regulation to the embarrassment and confusion of the Amateurs concerned. **This will now cease! The Handbook for the Guidance of Operators of Amateur Stations is being reprinted and will shortly be available to Amateurs through the usual Booksellers or direct from the Postmaster General's Department.** Other concessions granted to Australian Amateurs due to W.I.A. representations will be included and it is every Amateur's duty to obtain a copy and keep it handy at his operating position in the "shack".

Concerning the use of high power components, Paragraph 62 of this Handbook reads as follows:—

"Transmitting apparatus installed in an Amateur Station must be operated in such a manner as not to exceed the power authorised. Single components such as valves, transformers, etc., capable of handling power in excess of that licensed are permitted without restriction in Amateur Station transmitters, but where a combination of such components is in use a method satisfactory to the Department must be employed to ensure that the d.c. power input to the anode of the final transmitter stage cannot exceed that authorised. For example, power supply transformer tappings should be arranged in such a way as to obviate without a major alteration the possibility of an increase of voltage beyond that necessary to supply the licensed power."

Unlike operators of bushfire fighting transmitting equipment, fishing craft and other small ships transmitters, taxi services, etc., the Amateur is a qualified technical person in his own right and is a licensed member of a recognised transmitting service. This service has never let the country down during times of either Civil or National emergency and with its members' "know-how" equipment is designed and constructed in accordance with any regulations or specifications.

Let us keep it this way! Paragraph 62 permits you to construct and operate your equipment to standards previously unobtainable. Don't abuse it! Those who do cannot expect the assistance or sympathy of the W.I.A. Administration. The old "bogey" of the use of high power components is now history. It will be kept that way for the betterment of Amateur Radio. **The way it is kept is up to you—the licensed Amateur.**

FEDERAL EXECUTIVE.

AMATEUR TELEVISION

PART ONE

BY E. E. CORNELIUS,* VK6EC/T

WITH the commencement of Television in N.S.W. and Victoria, and its extension to the other capital cities in the next year or so, an upsurge of interest in Amateur Television may be expected. A broadcast service means receivers, and a simple converter on the front end of a standard t.v. receiver provides one end of an Amateur circuit. All the commercial components available are designed around our 625 line system. A broadcast service too, can be pressed into service to provide the Amateur's source of synchronising signals.

For these reasons therefore, I suggest that Amateur t.v. in Australia should concentrate on 625 line standards, with both video and sound paralleling the broadcast service. The sound carrier should be 5.5 Mc. above the vision carrier, f.m., with 50 Kc. deviation. Then any commercial receiver, or home-brew either for that matter, can be pressed into service as a high quality monitor, or Amateur receiver.

This series will describe equipment for 625 lines, to Australian standards. The lowest, and therefore easiest band on which we may operate is 288 to 296 Mc. I therefore recommend that we set up a standard t.v. channel within that band—

i.e. Vision carrier 290.25 Mc.
Sound carrier 295.75 Mc.

With vestigial sideband transmission, the video does not extend below 289 Mc., leaving one megacycle of the band undisturbed. The transmitter to be described conforms to this plan.

The basic equipment needed can most easily be shown by the block diagram in Fig. 1. Variations of the scheme will be elaborated as each unit is described.

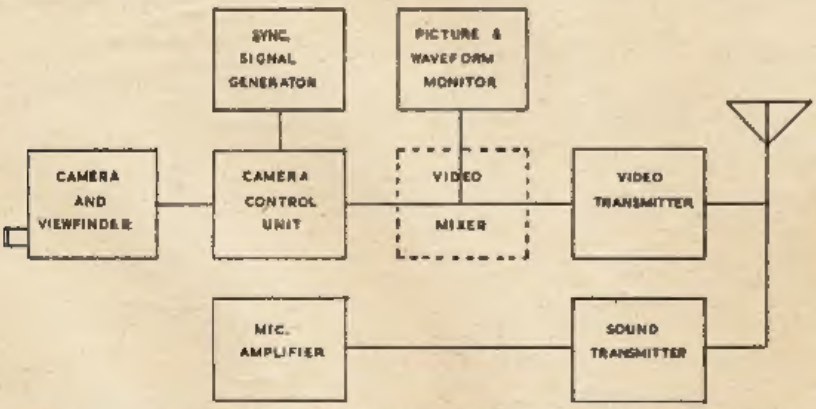


FIG. 1 — BLOCK SCHEMATIC-CAMERA CHAIN

Vidicon type camera tubes are now available at reasonable cost. They are satisfactory for Amateur use. Cost—approximately £A38 landed here.

With this tube, the Amateur can build a simple t.v. transmission chain, or can make elaborate equipment approaching commercial broadcast standards. For a start, a flying spot scanner will serve to generate signals from transparencies, slides or film negatives. But soon the desire for "real pictures" will develop, and a camera will be projected. The method for obtaining one of these tubes will be outlined in Part Two.

This series of articles will be built around specific circuits, which work well, and can be duplicated if you wish. Some of the data is basic, while some will be subject to your own convenience, pocket and what you have. The results obtained with the equipment to be described are in conformity with Australian commercial standards, with full 5 Mc. video bandwidth. To obtain this the equipment is fairly ambitious, but simplifications will be outlined, but with correspondingly lowered performance.

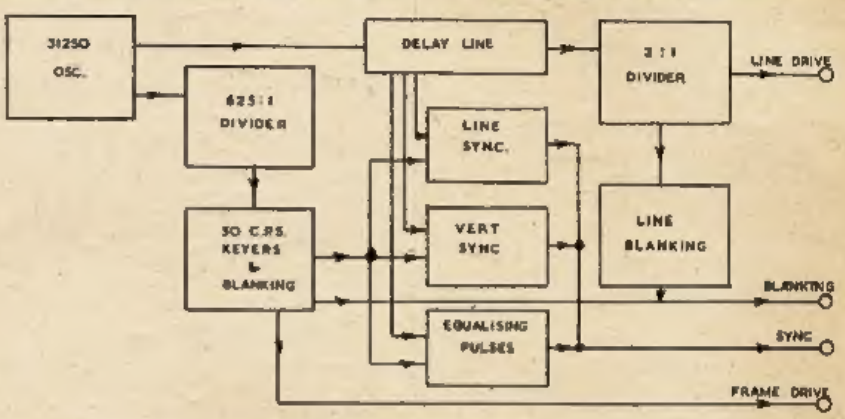


FIG. 2.—SYNC. GEN. BLOCK SCHEMATIC

The items described will be:—

1. **Synchronising Signal Generator**—with 21 tubes, giving standard outputs of 4 volts peak to peak in 75 ohms, negative going, to C.C.I.R. standards.
2. **Vidicon Camera**—with 5FP7 electronic viewfinder. The camera has 14 tubes, with an output of 1.0 volts p/p black negative. Viewfinder with 10 tubes uses 8kv. e.h.t. for a bright picture under any lighting conditions. Full instructions for making all camera magnetic components will be included.
3. **Camera Control Unit**—with 5FP7 pix monitor, and VCR139A waveform monitor. Output 1.4 volts composite video with sync. and blanking, ready for transmission.
4. **Video Mixer** enabling four picture channels to be mixed, and also inserting blanking and sync. With minor additions, this unit may be used in place of the camera control.
5. **Master Monitor** with a 12" picture monitor, using a VCR140, and simultaneous twin waveform monitors at both line and frame rates, using 5BP1s. Pulse cross display facilities are provided, and it can be used as a transmitter monitor, with detector diode and amplifier. Input required is 1.4 volts composite video.
6. **Video Transmitter** on 290.25 Mc., with 10 watts peak white output from a QQE03/12, vestigial sideband filter, and broad band antenna with 10 db. gain.
7. **Regulated Power Supplies**.—These are a must for most units.
8. **Video Oscilloscope**, grating generator, test charts and testing methods.

Before attempting to build a camera, other equipment will be needed, and the total number of tubes required will be considerable. I will describe fairly complex equipment with performance to C.C.I.R. standards, that you can duplicate if you wish. I will also show simplifications, although performance will suffer somewhat.

But you can make good pictures with comparatively simple equipment so do not be alarmed at the complexity of that described, as they have been designed to duplicate all broadcast t.v. functions, and much is not essential, although perhaps desirable.

To duplicate the equipment described is a project for a couple of years of work, but Amateur t.v. lends itself to club or community effort. A group of

* 157 Wood Street, Inglewood, W.A.

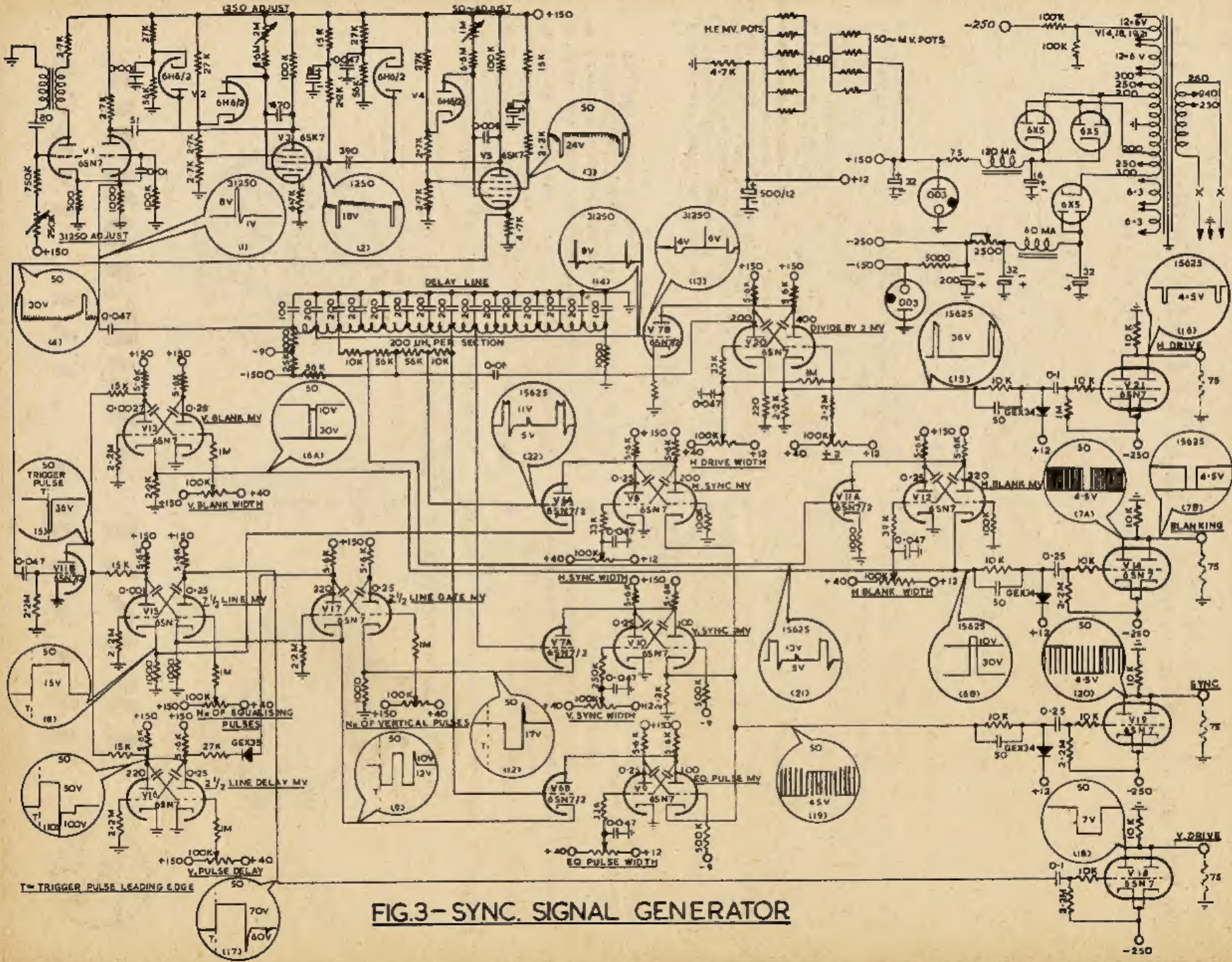


FIG.3– SYNC. SIGNAL GENERATOR

MODEL "1XA" CRYSTAL MICROPHONE INSERT

AUSTRALIAN MADE — — FOR AUSTRALIAN CONDITIONS

FITTED WITH PLATED REAR SHIELD TO ELIMINATE HUM PICK-UP

- **Patented crystal unit guarantees outstanding efficiency and performance.**
- **Protected against ingress of moisture with approved moisture sealed crystal element.**
- **Small — compact — lightweight — durable.**
- **Will not blast from close speaking.**
- **Precision engineering ensures realistic reproduction and high output with long life and dependable operation.**
- **The only unit available with a genuine sintered metal filter.**
- **Good high frequency response ensures excellcellent speech reproduction.**
- **Aluminium diaphragm mechanically protected and frequency controlled by "Zephyrfil" filter.**
- **Australian made throughout.**
- **Only carefully selected cements used throughout, to suit Australian climatic conditions.**

TECHNICAL DETAILS

Rochelle salt crystal microphones are perhaps the most widely used for all types of service where quality speech and music reproduction at high output levels is a requirement. They are dependable in performance and when fitted with the appropriate "Zephyrfil" filter, their frequency response may be adjusted to suit any application or requirement.

This crystal microphone requires to be terminated with a high value parallel load of the order of 1 to 5 megohms for best results.

The mass of the moving parts is small, hence the sensitivity is high and a high efficiency is achieved.

Light gauge solder lugs are provided so that excessive heat in soldering will not be transmitted to the crystal element.

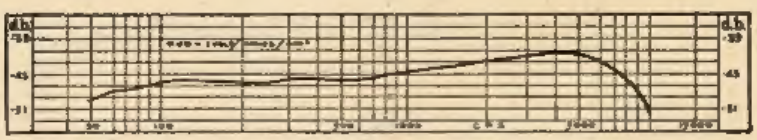
When mounted in a microphone cage, it is recommended that the insert be suspended in rubber, to eliminate shock and vibration.

One of the connecting lugs is directly connected to the case and care should be taken to solder the metal shield of the microphone cable to this solder lug, keeping the unscreened portion of the centre conductor as short as possible to eliminate hum pick-up.

All crystal elements are mounted on high grade suspension pillars, being fixed thereto with a good quality cement, thus ensuring stability and long life.

Case 1¼" diameter (rear), ⅜" thickness, 1-13/16" overall diameter (front) with filter fitted.

Frequency Response = 60-6,500 c.p.s.
Output Level = —45 db (0 db = 1 volt/dyne/cm²)
Impedance = Model 1XA Grid 1 — 5 megohms.



Approximate Frequency Response Curve

AVAILABLE FROM ALL LEADING TRADE HOUSES

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58 HIGH STREET, GLEN IRIS, S.E.6, VIC.
Phone: BL 1300

two, three or more Amateurs can build a system in reasonable time, and share the work and expense. The simpler equipment is well within the capabilities of the average man.

THE SYNCHRONISING SIGNAL GENERATOR

This is the heart of the system, generating accurately timed pulse trains to hold all transmitting equipment in exact synchronism, and provide the transmitted sync. signal for all receivers. See Fig. 2.

There are four outputs:—

1. Line drive, for all line time bases and keyed clamps at the transmitter end, at 15,625 pps. of 5.6 usec. duration, leading sync. by 2.8 usec.
2. Frame drive for all transmitter frame time bases, 50 pps. of 7½ lines duration.
3. Composite blanking for blanking of flyback in all picture tubes except the viewfinder. Line duration 11.6 usec, frame 18 to 22 lines.
4. Composite sync. for transmission with the blanked picture signals for sync. separation in all receivers. To Australian specifications.

It is easy, but not always convenient, to extract composite sync. from a sync. separator operating on a broadcast transmission. A good sync. separator will extract clean sync. signals, and these may be used to synchronise free running time bases in the camera, etc. Alternatively, the sync. can be used to control blocking oscillators or multivibrators which will generate line and frame driving pulses for use by driven time bases. Combining the two pulse trains will give a composite blanking pulse train, but the front porch will require more complex circuitry.

The sync. generator whose circuit is shown in Fig. 3 uses a 6SN7 (V1) as a free running blocking oscillator, and buffer feeding a delay line for timing of the equalising, line sync., line drive, line blanking and field sync. pulses. The buffer also feeds a 625 to 1 frequency divider, V2, 3, 4 and 5, using two phantastron circuits, each dividing by 25. The second phantastron delivers 50 c.p.s. pulses (4), which are used via a buffer (V11B) to trigger the three 50 cycle multivibrators V13, 15 and 16. The waveforms shown on the diagram are numbered, and will be referred to by the number in brackets as (4) above. The frequency of the pulse train is shown at the top of each oscillogram.

Composite Blanking

On receipt of the negative 50 cycle trigger pulse (5) from V11B, V13B is cut off, V13A conducts and a positive pulse (6A) is emitted from the cathode. That is the field blanking pulse, and is adjusted to from 18 to 22 lines duration.

Similarly, V11A receives positive triggers (21) from the delay line at 31,250 pps., with each alternate pulse sitting on a 15,625 pps. pulse from V20, via the resistor network. Only the alternate pulses will overcome the bias of V11A, causing it to conduct, and the negative trigger from its plate, cutting off V12A, causes V12B to conduct, and emit a train of line blanking pulses (6B). Their duration is adjusted to 11.6 usec.

The common cathode connection to V13A feeds composite line and field blanking pulses to the diode clipper and the output tube V14. This tube is normally cut off, with anode at eath potential, but on conduction at each input pulse, a 4 volts negative pulse train is delivered to a 75 ohm load (7A) (7B).

Composite Sync.

Tube V15 (a) provides field driving pulses to the vertical drive output tube V18.

(b) In co-ordination with V17, the 2½ line gate MV, and V16, the vertical pulse delay MV, keys in 5 pre-equalising pulses, and 5 post-equalising pulses in the composite sync. circuit. This is done via V6B, the equalising pulse gate, which allows the equalising pulse MV (V9) to operate only while its cathode is not positive, i.e., when V15B and V17A are cut off. The sequence is as follows:—

V13B, V15B and V16B are normally conducting, V15B cutting off V6B the equalising gate, and paralysing V9, the equalising MV. The negative trigger pulse from V11B cuts off V15B, allowing V6B to conduct, opening the gate to the 31,250 pps. triggers from the delay line to V9, which then generates equalising pulses.

At the same time V15A conducts, its cathode runs positive (8), cuts off V6A, the sync. gate, and closes down the line sync. MV (V8). Also at this instant, the 50 pps. trigger pulse cuts off V16B, readying it for cycling 2½ lines later. At the end of 2½ lines (5 equalising pulses), V16 cycles, V16B conducts again, its plate going negative, and via the diode, cutting off V17B, allowing V7A to conduct, gating in the vertical sync. pulses, and gating out the equalising pulses via V17A and V6B (9).

After 2½ more lines, the vertical sync. period, V16 restores to normal, gating out the vertical sync. pulses, and gating in equalising pulses again. After a total of 7½ lines, V15 cycles, V15A cuts off, V6A conducts, and the horizontal sync. MV starts up again until the next trigger.

The sequence thus is, horizontal sync. pulses till the trigger, then 5 equalising pulses, 5 vertical sync. pulses, 5 equalising pulses, and then the sync. pulses again. All done by the common cathode connections of the enabling MV's, and the gates, V6A, V6B and V7A. A common cathode connection between the H. sync., V. sync., and equalising multivibrators, goes to the composite sync. output tube (19), clipping in the GEX34, and the output tube grid, with the sync. train available at the anode of V19, at 4 volts p/p. in 75 ohms, negative going (20). No coupling capacitor is needed, as the tube is normally cut off by grid current bias, and the anode at earth potential.

The line sync. MV (V8) gets its triggers similarly to the blanking MV, but via V6A, at 15,625 pps. (22). The equalising and vertical sync. MV's get their triggers direct from the delay line at 31,250 pps., via V7A and V6B. The pulses are adjusted to correct durations by the corresponding potentiometers in the MV grid circuits.

Line Drive

The line driving pulses at 15,625 pps. should precede blanking and sync., to overcome camera cable delay, so triggers are fed from the first tapping on the delay line (14), via V7B to the grid of V20A, normally cut off. This MV has constants such that it will not cycle at trigger rate of 31,250 pps., but will do so at 15,625 pps. The potentiometers are adjusted for correct division, to line rate, and for correct driving pulse width, from 4 to 7 usec. (15). This driving pulse train is delivered by output tube V21 (16). The drive pulses are also fed back to the resistor network in the delay line, for addition to the 31,250 pulses, to provide the trigger pulses for the line sync. (22) and line blanking MV's (21).

Frame Drive

An output of the 7½ line MV (17) is used for frame drive, via its output tube V18 (18).

SIMPLIFICATIONS

This unit will deliver outputs to C.C.I.R. standards. For Amateur work this is not vital, and the whole of the composite sync. circuit can be omitted. The receiver will then trigger from the blanking pedestals, but with a tendency to picture "tearing" at the top, and erratic interlace due to lack of serrations in the vertical sync. pulse, and equalising pulses.

It will then be necessary to retain V1 to V5, the divider chain, V11, 12, 13 and 14 for blanking (and sync.). V13 can feed V18 for frame drive. The delay line can be omitted, but V20 will be required for 2 : 1 division. It may be feasible to combine the functions of V20 and V12. V20 will give line drive, as before.

CONSTRUCTIONAL

There are no tricky parts in the construction, although the delay line may be unfamiliar. This consists of 14 identical inductors of 200 μH. each, in series, ⅜" apart, on a ¼" dowel. The tapping points are shunted to earth by 200 pF. capacitors, with each end shunted by 100 pF. The delay per section is $\sqrt{LC}$ (μF., μH., usec.) = 0.04 usec. Mine were wave wound, but you could scramble wind in slots in a ¼" former (about 120 turns each). Match these windings, and mount the whole unit in a shielding box. The 200 pF. capacitors should be matched to 2% or better, but the actual value could be anywhere from 180 to 220 pF. For 200 pF. and 200 μH. the impedance of the line is 1,000 ohms. For other values it is $\sqrt{L \div C}$, and best obtained by experiment after assembly. Feed 31,250 pulses to the line, and bridge a c.r.o. across the input to the line. Fit a **carbon** potentiometer of 5,000 ohms as termination. Vary this for the cleanest pulse display, measure its value, and fit a fixed resistor of the same value.

The blocking oscillator transformer for the master oscillator can be a line b.o. transformer from a receiver. This may need damping with a resistor across the secondary, to prevent a damped wave train from following the output pulse. As there is a lot of meat in this package, some thought on chassis layout will be well worth while. The pulses have rise times of the order of a few tenths of a microsecond, so will radiate strong harmonics. I suggest that the layout shown in Fig. 4 could be used as a guide. The whole unit can then be housed in a metal case 18" x 14" x 7", with the chassis mounted vertically in the case, tubes and controls on one side, wiring the

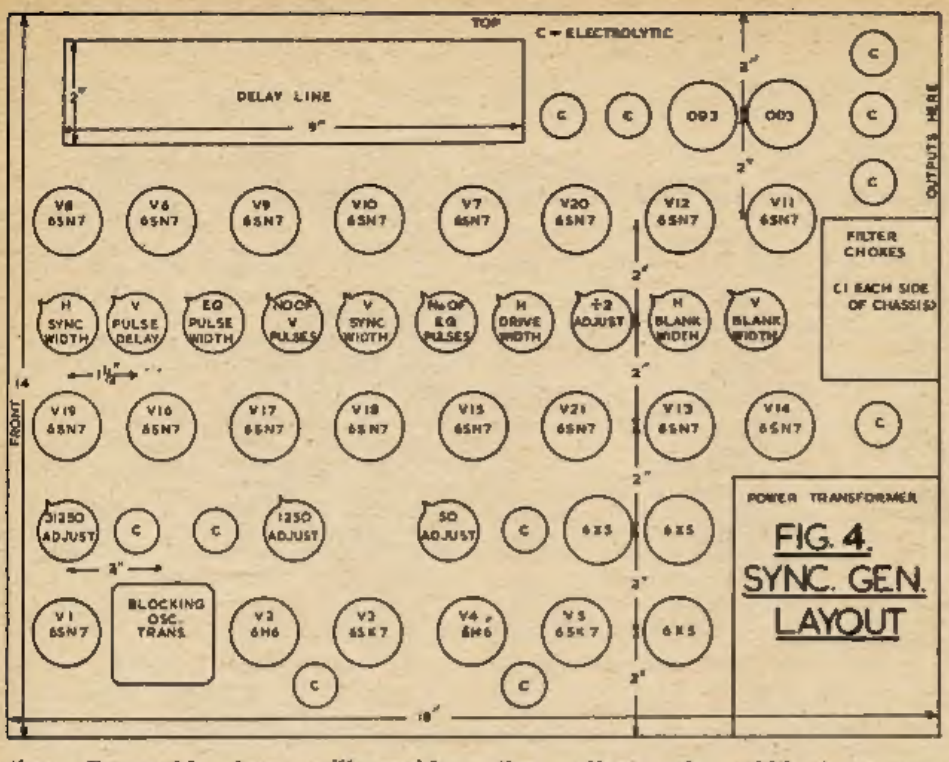

FIG. 4. SYNC. GEN. LAYOUT

other. Removable doors will enable easy access and alignment.

Adjustment

This really needs a good c.r.o., preferably with triggered sweep, but an orthodox unit can be used, with some limitations. First, set the master oscillator to 31,250 pps., by comparison with some known frequency standard. **Always** take test output from the buffer (1) so as not to disturb the frequency with your test prods. A wavemeter will make an excellent frequency standard—remember the output is rich in harmonics. Or you can use a c.r.o. comparison with an accurate audio oscillator.

To adjust the first phantastron divider, take output from the screen of V3 (2), via a 10,000 ohm resistor, hold this in sync. on the c.r.o., and spread it as wide as possible. Count the small downward pulses from leading edge to leading edge of the 1,250 pps. output pulses. Adjust the 2 meg. pot. in the grid circuit for a count of 25. If any kick back from V5, which is still unsynced upsets the display, open its plate supply till V3 counts correctly.

Now adjust V6 for a count of 25 also in a similar manner (3). Compare the output frequency with the 50 cycle mains. It should be very close, better than a quarter cycle. If not, check back again. Once adjusted, the phantastron is very stable, but the initial adjustment is tricky, although much easier with a triggered sweep c.r.o.

Next to be adjusted is V20, for division by 2, and pulse width. Connect c.r.o. to plate of V20A, via a 10,000 ohm resistor, and adjust for division. Remove 10K resistor, connect to cathode, display two pulses (15), and measure distance from leading edge to leading edge. This is 64 usec. By proportion adjust the pulse width to about 5 usec. Now comes the H. sync. MV (V8). Make sure it is being triggered at 15,625 pps., not 31,250, and then adjust pulse width to 5 usec. Similarly with V12, the H. blanking MV, adjust to 11.6 usec. If triggering is occurring at 31,250, adjust the bias, about —9 volts, by the 1K, 25K voltage divider at the input of the delay line.

For the vertical sync. MV (V10), allow it to run continuously by removing V17 pro. tem., and adjust the slot width to 5 usec. Similarly with V9, the equalising MV, remove V17 and V15, and adjust pulse width to 2.5 usec.

For adjustment of the 50 cycle MV's a triggered sweep is a great help. Obtain your 50 pps. trigger or sync. pulse from the trigger line (5), plate of V11B. Display the vertical sync. area of the composite sync. (19), and adjust V16 to give 5 pre-equalising pulses, V17 to give 5 vertical sync. blocks, and last, V15 to give 5 post-equalising pulses. Using a standard c.r.o., difficulty may be experienced maintaining sync. with the considerable sweep expansion needed to open up the V. sync. area enough for counting the pulses.

The vertical blanking MV is adjusted by superposing some 31,250 or 15,625 pulses from the master oscillator, or appropriate MV, and counting either 36 to 44 pulses for triggered or 50 cycle sweep, or 18 to 22 sync. pulses for 25 cycle sweep. This is because trigger or 50 cycle sweep displays **both** fields interlaced, and the sync. rate pulses are apparently at 32 usec. intervals.

Critical Components

Generally speaking 10% components will serve, with the following exceptions, which will need to be checked by experiment. The counter chain grid resistors. These will all be off, if substitute tubes are used, and the circuit values shown are right for **my** 6SK7s. The low value capacitors in the MV's have been selected, and the nearest standard value shown. The 0.25 μF. capacitors are not critical. The resistors in the voltage divider chain in the delay line may have to be adjusted on test. Use linear potentiometers throughout, otherwise one end of logarithmic types will be cramped. The delay line capacitors must be matched as outlined earlier. The tubes shown have been used because I had them. Any pentode with suppressor not tied internally to cathode will do for the phantastrons. 12AU7s may be used in place of the 6SN7s without alteration. 12AX7s with some attention to the small capacitors in the MV's.

Power Supply

That shown is satisfactory. As the negative supply has to deliver about 250 mA. for the few microseconds that all output tubes are conducting, during the V. sync. period, although average output is only 60 mA., the large 200 μF. output capacitor in the filter is essential. The glow tube on the 150 volt negative bus is to make sure that no variations find their way into the bias circuits. Glow tube regulation of plus 150v. is quite satisfactory, as the current drain is constant at about 120 mA.

In this Part, I have described the most important unit, and the most difficult. In Part Two I will describe the camera and viewfinder.

Who's Afraid of a Receiver?*

BY BYRON GOODMAN, W1DX

THE sad ungrammatical answer to the above question is "Too many." Ask the Hams of any representative group how many of them ever dig into their receivers for any reason whatsoever, and you're likely to find that most of them are literally scared to death of the mere thought of action. This isn't just an idea we're pulling out of the air; be perfectly honest about it and you will admit we're describing the situation as it is.

Perhaps you're beginning to wonder why anyone should want to touch a receiver. After all, a good receiver should be in top working condition all the time, shouldn't it? Phooey! Why should it? Even the best receivers can stand touching up from time to time. Years ago the author was visiting a W2 friend of his who claimed he had a good location for 7 Mc. DX but it was no good for 14 Mc., and he had the cards to prove it. This we had to see, because it just didn't make sense. Listening around on the two bands did indeed show a marked difference in the way the bands sounded; 40 was "hot" and 20 was dead. The W2 was a sharp one, and even had a small antenna coupler between antenna and receiver.

When asked if he had checked the front-end alignment on 20, our friend replied that the receiver trimmers were sealed and the guarantee would be void if he broke the seal. (You old timers will recognise the receiver.) As we took leave of our friend we went out on a limb and said, "Break the seals, align the front end, and watch 20 come alive." A few days later we got a card from him, admitting he had screwed up his courage, broken the seals and aligned the front end on 20. Our pal concluded by enumerating the several new countries he had worked on 20 (including a couple we could have used nicely!)

One more fr'instance. Less than a year ago a friend built a new preselector which he connected ahead of a current model of a good receiver. Our friend was lavish in his praise of the preselector's performance, claiming that 10 and 15 metre signals practically inaudible on the straight receiver were loud and clear when the preselector was hooked in. We couldn't believe the receiver was **that** bad, so we asked him to check the front-end alignment on 10 and 15. The subsequent red-faced report was that the preselector didn't do as much good as he thought; the receiver front end had been out of adjustment.

But if you had wanted the story of somebody's life you would have bought a copy of "True Confessions." You want to know about receiver-phobia. We just threw in the examples to show how two Hams, who weren't afraid to tackle their receivers, avoided holding to erroneous conclusions about frequency-sensitive locations and superlative preselectors.

* Reprinted from "QST", May, 1957.

• There is a growing tendency these days to accept a communications receiver as a strange piece of complicated gear with "innards" no one but a man from Mars should touch. W1DX diagnoses this condition as "receiver-phobia" and tells why and how to avoid catching it.

Let's examine the possible causes of receiver-phobia and then talk about cures and the benefits of shaking off the affliction. What's so sacred about a receiver? Why shouldn't any Ham worthy of the name tackle a receiver as readily as he will a transmitter? For one thing, many operators are afraid to touch a receiver because they're afraid they'll spoil the dial calibration. (This is the same dial calibration they grouse about because it isn't accurate to 100 cycles!) Then there is the fear that the receiver will be thrown so far out of alignment that no one would ever be able to put it back. And, last but not least, there is the Ham who throws up his hands on the basis that "the thing is just too darned complicated." We're not talking about making any extensive receiver modifications, so the old it-will-lose-its-resale-value argument doesn't apply.

Let's examine these "reasons" for not touching a receiver. Do you think some high-powered engineer lines up every receiver at the factory? Of course not. It's someone who was taught the job, and chances are he or she knows very little about receiver theory and design. He or she merely follows a set routine, not at all unlike the alignment procedure outlined in most instruction books. Throw the receiver too far out of alignment? You could only do that by changing something very drastically not by twisting a few trimmers. After all, most receivers coming off an assembly line are not close to alignment, except through chance or a complicated system of subassembly testing. Production receivers have to be brought into line by the hired hands mentioned above.

As for the last argument, "complicated" is a relative term. A hand-cranked phonograph is sheer magic to a native of OQ5, but it is only a curiosity to any high-school student who has his room cluttered up with hi-fi gear. Sure, a modern receiver looks complicated to someone with no electronic background, but it uses tubes and components quite similar, except in size and shape, to those used in a transmitter. The wiring diagram is really no more complicated than that of a modern band-switching transmitter; the sad truth is simply that most of these schematics are laid out so poorly that they look ten times more involved than they really are. We don't suggest that the manufacturer does this deliberately to justify some of the current prices; we suspect that worrying about clarifying the schematic in the instruction book is merely considered an unimportant waste of time. If so, it's too bad, because we might have a more technical breed of Ham if things were made a little easier for him at the start. If the schematics were laid out with fewer long leads running all around the drawing, and each stage were set off just slightly from the others, a tyro would have considerably less trouble following the signal through from antenna to output. And surely some of the switched circuits could be less complicated looking! Granted it takes some planning to organise a schematic so that it is relatively easy to follow, but it would be a big help to newcomer and old timer alike.

THE SOLUTION

There are two ways you can go about ridding yourself of receiver-phobia. The long, but more satisfying, way is to learn what makes receivers tick. Find out from various texts just what superheterodynes are, the principles behind them, and some of the variations (single and multiple conversion, various detectors). Learn to visualise what is happening in your receiver[1] as you tune across a signal; pay no attention to what the signal is saying, at least while you're analysing receiver operation. Visualise the actions of the controls as you observe the effects, and if you don't know the answers, go back to the texts.

But maybe you have only 60 or 70 more years to live, and you would like a short cut to curing your receiver-phobia. OK, take the plunge. Lift the lid! Don't touch anything yet; just dig into the instruction book and find the section where it talks about alignment. From the diagrams in the book and the lid-up receiver, locate a trimmer adjustment on an i.f. transformer. Check to make sure you have an alignment tool (insulated screwdriver or wrench). If you haven't, go out to a radio store and get one. Turn on the receiver and tune in a signal. Check the location of that i.f. trimmer adjustment against the book just once more, grit your teeth, and turn the adjustment a little! Nothing real serious will happen, except that the signal you had tuned in may get a little weaker (or stronger). You will find that you can peak a signal or drop it down by your adjustment of the i.f. trimmer. This is the same sort of operation you perform when you peak the drive in your transmitter, but this is a receiver and you've taken the big step. (Don't fool with crystal filters unless you know your stuff; they can be tricky). And don't be like one fellow we heard of; his receiver wasn't working too well so he tightened all of the loose screws, most of which were trimmers!

Again referring to the instruction book, read about front-end alignment

1 As described in McCoy's "Let's Listen", "QST", March, 1953.

and repeat the experiment. You will find that trimmers on the r.f. and mixer circuits change the signal strength, while oscillator trimmers change the tuning and, consequently, the dial setting for a given frequency.

CHECKING PERFORMANCE

One point that bothers many Amateurs, and rightly so, is how to determine when their receivers have deteriorated in performance. To some extent the ability to spot such things depends upon how much you want to learn about receivers and what happens inside them, but we can pass along a few simple checks and you can be your own judge as to whether or not you want to do something about them.

Take the matter of hearing the weak ones. This is described by Hams as "sensitivity" or "signal-to-noise ratio," but it means "hearing the weak ones." If your receiver has an antenna trimmer, as most of the current models do, the increase in noise you hear as you swing the trimmer through resonance (with the antenna connected) is a pretty fair measure of how good the front end of the receiver is. If you're in a noisy (electrically) location, the front end doesn't have to be as good as it does in a quiet location, because the local electrical noise is the limiting factor. Suspect the front-end alignment of your receiver if the noise does not peak up with the antenna trimmer the way it did when the receiver was new.

Many owners of two-dial complete-coverage receivers align the front ends of their receivers **in the Ham bands** as soon as they get their receivers, to insure that the best performance is available where it will do the most good. In most cases this Ham-band alignment will not be the same as that described in the instruction book, but all it involves is touching up the trimmers on the r.f. and mixer coils when the receiver is tuned to the centre of the Ham band for which the band switch is set, with the antenna connected. Refer to the instruction book for the trimmer locations, don't touch the oscillator trimmer unless trimming the mixer pulls the receiver badly off calibration.

If the Ham band falls at the high capacity end of the band-set capacitor, as is true of the 20 metre band on a number of receivers, the trimmer capacitors shouldn't be touched. Instead, pull the r.f. and mixer coils into line by adjustment of the tuning slugs, if there are any. If there aren't any, you will need a "tuning wand" to check alignment at the low frequency end of a range. This is an insulated rod with a brass sleeve at one end and a powdered iron slug at the other. Pushing the brass end in or alongside the coil lowers the inductance, and bringing the iron end near raises the inductance. If bringing either end of the wand near the end of the active r.f. or mixer coil increases the strength of an incoming signal, it indicates that the circuit is not peaked for that frequency. In this case you can change the inductance of the coil by cementing a closed copper loop or a bit of powdered iron slug at an appropriate distance from the coil. Obviously, you don't have to modify the inductance of the r.f. coil if it has an antenna trimmer across it, and probably the best addition to a receiver without an antenna trimmer would be such a trimmer. And, of course, trimming the inductance at the low frequency end will require resetting the trimmer at the high freqeuncy end.

Checking frequency calibration is something every Ham should know, and it shouldn't be necessary to point out that a 100 Kc. crystal oscillator is a Ham's best friend for this little task. You can bring a receiver into fair calibration on one of its ranges by bending plates on the oscillator tuning capacitor, but it's a job only for a guy with patience and confidence.

We've already mentioned i.f. alignment; you just peak the trimmers of the i.f. transformers for maximum signal. If the receiver has a crystal filter and you use the filter a lot, be sure that your test signal has been properly centered in the crystal filter before you touch up the i.f. trimmers. Do this by switching the filter in, the a.v.c. on and the b.f.o. off, and tuning slowly across a steady signal (a harmonic from your 100 Kc. calibrator makes a good one) for maximum S meter reading. If the receiver drifts or if the crystal filter is very sharp, it pays to "rock" the tuning a little while you touch up an i.f. trimmer. This merely means tuning back and forth through the peak to be sure that you are not slowly drifting off the peak.

If your receiver has no S meter, and you don't have a voltmeter that can be hung across the a.v.c. line temporarily to act as one, your only recourse is to turn on the b.f.o. and peak the i.f. trimmers by ear. Here again the "rocking" technique is suggested, to eliminate minor drifts of the oscillators.

RECEIVER FAULTS

We won't attempt to kid you into believing that brand new receivers do not have shortcomings, because some of them do. One has no right to expect an inexpensive receiver to do everything the expensive ones will. The inexpensive receivers have corners cut right and left, in an effort to bring the price down, but some of these omissions can be corrected by the owners. One fault you will sometimes find in the low-priced receivers is a change in frequency with a change in gain-control setting. This doesn't (or shouldn't) happen in a good receiver. Usually all it takes to correct it is to regulate the anode voltage on the high frequency oscillator and the screen voltage of the mixer (they're usually the same tube element unless a separate oscillator tube is used). On occasions, the b.f.o. may also require voltage stabilisation. If you have a receiver that has this characteristic of frequency change with change in gain, all it may need is the addition of a VR tube and dropping resistor of the right values. Check the receiver voltage chart for the proper value. If, for example, the required voltage is 85, you can get it from a VR105 and a suitable dropping resistor. If the receiver already has a VR tube and still exhibits the trouble, make sure that (1) the VR tube is lit, and (2) the mixer screen voltage is regulated. (It isn't in all receivers.)

If the receiver seems to drift too much, you can try the dodge of propping up the lid, as pointed out in an earlier article.[2] Don't get any big ideas about putting in a compensating capacitor across the high frequency oscillator, unless you want to run a long series of tests. The trouble with temperature compensation is that you have to find a spot in the set where the temperature varies in the same way that the frequency does. Since the temperature drift may be caused by thermal changes in several components, you can see how tough your chances are of finding the magic spot. Shoot for reducing the temperature rise; your hair will stay dark longer.

HMMMM—HUM

Some of the inexpensive receivers have a little too much hum in the audio. This might be lack of filter in the power supply, so the first and most logical thing to try is another 20 μF. across the power supply. However, usually life isn't that simple, and the next thing to try is to find out if the hum comes from ahead of the audio volume control. If the hum increases with the setting of this control, the hum is coming from somewhere ahead of the control, and this can mean that either the lead from the detector or the detector itself is the culprit. Shielded leads to and from the volume control may be the answer to the problem; at least they're worth a try. If the hum comes in from beyond the volume control, as indicated by no change in hum level with the volume setting, using smaller coupling capacitors between stages will reduce the low frequency response and, consequently, the hum level.

If you're a c.w. man and find that you hear no T9 signals on 21 and 28 Mc., but you do on the lower bands, you have frequency modulation of the high frequency oscillator. This is tough to cure sometimes, but just changing the oscillator tube may help. If the oscillator circuit is one with the cathode tapped "up" on a coil, adding a small low resistance r.f. choke to the ungrounded heater lead may reduce the hum. Don't overlook the possibility of the rough note coming from a humming transformer that vibrates the chassis and modulates the oscillator frequency; the cure here is to tighten the screws that hold the transformer together.

CONCLUSION

A dozen articles might not cover all of the facets of receiver design, test and maintenance, and we claim nothing more than a start for this one. But it will have served its purpose well if a few sufferers of receiverphobia have been started on the road to recovery through the assurance that they have nothing to fear from the receiver itself, the only enemy is one's own ignorance and languor.

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2 Goodman, "Getting the Most Out of Your Receiver", "QST", January, 1954, and reprinted in "A.R." June, 1954.

CORRESPONDENCE

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

DX COUNTRIES' LIST

Editor "A.R.," Dear Sir,

The more I think about this "country" business, the sillier it seems. Of course Hams are recognised as being a little that way to start with, but these different lists of countries for DXCC purposes make things more difficult.

The W.I.A. has its own DXCC but, as far as can be seen, this follows no apparent pattern. One would think that Australia, being a member of the British Commonwealth, would naturally follow the R.S.G.B., but no—the R.S.G.B. countries' list is not a post-war affair. If you worked a fellow back in 1921 you can still get credit for him in the R.S.G.B., but not in the W.I.A.

Seeing then that it is a strictly post-war affair you might think that it would follow the A.R.R.L.—you're wrong again brother. It does not do that either—for instance the A.R.R.L. count the British Phoenix Islands and Canton Island as two separate countries, the W.I.A. says they are not. The A.R.R.L. recognises Aland Islands as a separate country and so does "CQ", but the W.I.A. will not recognise this one, and so on.

The position is further complicated by "CQ" magazine having its own list and discrepancies creep in there also. As A.R.R.L. and "CQ" are both in U.S.A. you would think that perhaps they could achieve uniformity, but again No.

For instance "CQ" recognises the British Virgin Islands as a separate country, but the A.R.R.L. says that this is part of the Leeward Islands, and there are other similar instances.

Why can't we get some uniformity, and if we can't get that, why can't the W.I.A. announce a policy of its own and stick to it—saying that the W.I.A. will compile its own list of countries, then maybe the others would follow and we would get a uniform list.

Let's have a look at the various lists and see how silly it all is.

I can think of nothing sillier than the position in Great Britain where you can get credit for G, GM, GW, GI, GD and GC all in the one island group, under the one Government and using the same series of postage stamps. Here is credit for six different countries. Yet you take the position of Belgian Congo (OQ5), and Ruanda Urundi (OQ0)—separate stamp issuing countries. The A.R.R.L. and the W.I.A. say they are the same place. "CQ" recognises them as different. You will find them as separate in the Atlas.

If Great Britain is to be divided up into six, why can't we divide Italy into three? We already have Italy and Sardinia (I and IS), but although "CQ" recognises Sicily (IT) as separate for country purposes, the A.R.R.L. and the W.I.A. do not. To my mind it is just the same as Great Britain

There is a dependency of Mauritius called Rodrigues Is. which is a tiny spot some miles away from Mauritius. It has now received country status from the A.R.R.L.—yet Fanning Island and Christmas Island (VR3), which are just as far apart, are held together as one country. If they split the Caroline Islands into Western and Eastern Carolines, why not this? The same applies to Madagascar and some of the French islands separated from the main island by only a few hundred miles. Because an active Ham is there, it's called a separate country.

No doubt you have heard of Finland and Finnish Karelia (OH and UN). Karelia was the slice of Finland which Russia took. It is now recognised by all as a separate country. Let's have a look at post-war Germany—is not Western Germany and East Germany in the same position? The Russians took East Germany. It has a separate Government, issues its own stamps and is cut off from Western Germany by the so called "Iron Curtain". I therefore suggest that DL and DM should be recognised as separate countries.

There is also the question of the Falkland Island Dependencies and the operation therein of Argentine and Chilean Hams. A.R.R.L. and "CQ" recognise a contact with one of these stations as credit for that particular country. The W.I.A. will not, taking the attitude that these stations are improperly operating on British territory and are not therefore properly licensed inasmuch as they were not licensed by the Falklands authorities.

However, I understand that in the International Geophysical Year, foreign countries have permission to operate observation stations in the territories of other powers. Can it be that contacts with "LU" and "CE" stations operating in the Falkland Islands Dependencies during the I.G.Y. will therefore be recognised"??

If Arabia is divided up into Aden proper, the Sultanate, Quatar, and Trucial Oman, and Great Britain is divided into its six separate countries, let's have a crack at the assorted States which make up the Federation of Malaya. Each has its own Sultan and each issues its own postage stamps. Their claims to be considered separate countries are stronger than Scotland and Wales.

Then there is East and West Pakistan—separated by India—surely this is analogous to the Eastern and Western Carolines.

What about New Guinea and New Britain being separated—they are just as much separate countries as England and Wales are—perhaps more so.

If the islands around Madagascar can achieve country status, why can't the islands around Papua New Guinea receive the same treatment?

Perhaps the Americans might grumble if we counted the Aleutian Islands as separate from Alaska—but look at them on the map—they run right up to the Asian mainland—yet the one next to Asia counts as Alaska and North America.

Antarctica is another continent which merits some division—many countries claim portion of it as their own territory. Why can't credit be given for contact with stations which operate in that particular territory? The claims of those countries to the territory they say is theirs, seem to have been recognised internationally so why can't the countries list people bring themselves up to date?

I know that the present Manager of the DXCC, and his predecessor, are both well known DX operators, but apparently the compilation of the list is not left in the hands of one man only.

Can readers please be informed just who does run the W.I.A. DXCC Countries List and what experience (if any) have the people concerned in such matters as Geography, World Affairs, and DX operating"??

There are so many other examples that if I were to quote them all I'd never get this published. However, can something be done about it please?

—Alan G. Brown, VK3CX.

[Federal Executive of the W.I.A. were asked to comment on the above letter. Herewith is their reply. Ed.]

FEDERAL EXECUTIVE'S COMMENTS

Federal Executive has long been aware of the inconsistencies mentioned in this letter. As a result, late last year, the following motion was submitted for consideration by members of the International Amateur Radio Union

The motion moved by the Wireless Institute of Australia is:—

> "That an official I.A.R.U. DX Countries' List be prepared by a committee consisting of a representative from Region 1 (American Radio Relay League), Region 2 (Radio Society of Great Britain) and Region 3 (Wireless Institute of Australia), and all additions and deletions be made only by a unanimous decision of the three region representatives."

Results of the voting on this motion will appear later this year.

—Federal Executive.

OBLIQUE STROKE F.O.C.

Editor "A.R.", Dear Sir,

Reference Oblique Stroke F.O.C. in Feb. issue "A.R." On reading this conglomeration of garbage, my first reaction was to ignore it and treat it with the contempt it deserves, but for the benefit of all concerned I shall endeavour to enlighten readers as to why the "F.O.C." functions.

F.O.C stands for "First Class Operators' Club" Some of the rules are as follows: "Its aim will be to foster and encourage a high standard of operating ability and behaviour on all Amateur Bands. Membership be limited to those who can send and receive morse at not less than 18 w.p.m. Can QSY if necessary, break-in single channel working with v.f.o. is desired but not obligatory. Members prepared over the air to assist and advise newcomers to Amateur Radio. Operators will be elected to membership on recommendation of at least five sponsors who they themselves already are F.O.C. members. These sponsors must have been in contact with the operators concerned over the air and be satisfied that he or she can fulfill the foregoing conditions. Members should sign F.O.C. after their call sign. Members of club will adhere strictly to band planning and also members are reminded that good manners over the air are part of first class operating."

What is "snob value, discredit to the true democratic spirit, un-Australian,

un-democratic, time wasting," etc., about the above standards, Roth Jones?

There are approx. 181 members in Great Britain and approx. 145 members overseas. On looking very carefully through the P.M.G. Handbook of rules for Amateur Operators, I can see nothing that the signing of F.O.C. after one's call sign commits any breach of the regulations, so I am at a loss to know why Roth Jones thinks it quite illegal.

Soliciting for sponsorship to club is definitely barred and anyone indulging in such practices would have little or no chance of ever becoming a member.

Could anyone listen to the excellent operating ability and highly skilful technique employed in transmissions from VK3's FH, RJ, CX, VK4YP, VK-5BY and other members who have been appointed without solicitation and it may be significant that Roth Jones VK3BG has **not** been invited.

First thoughts, his expressions may be "sour grapes", but perhaps it may well be that he does **not** measure up to required standards.

Now, concerning the use of CQ/F.O.C. **certainly** this is used during the Annual Contest between members, how else would they be identified in their own contest?

There is no suggestion of "snob value" in the signing of F.O.C. but rather it should inspire other aspirants to improve their operating ability with a view of future membership. Readers will therefore agree that it is **not "un-Australian, un-democratic, time wasting"** as stated by Roth Jones, but rather it is an honour to belong to such an International Body of Gentlemen Operators

Roth Jones' statement re lowering of one's self to be a member of such a clique, is rather in reverse, as no doubt, old timers such as VK3RJ, VK4YP and I include myself will agree that the invitation to join F.O.C. and the day we were duly appointed members was the culmination of more than 20 years of hamming

Roth Jones' reference to "scab labour" and the "plague" brings discredit to no one but himself, as the prestige of membership of F.O.C. remains **untainted** and **unscathed**.

You should know better Roth Jones.

—Roy Baxter, VK4FJ.

[Letters along similar lines have been received from Messrs. E. J. R. Cowles VK6EJ, R. E. Jones VK3RJ, A. L. Kissick VK3KB, and A. Brown VK-3CX, but space does not permit publication.—Ed.]

— . . . —

TECHNICAL CORRESPONDENCE

S.S.B.

Editor "A.R.", Dear Sir,

Once again another is trying to convince himself and others that the trend towards s.s.b. is not all as is claimed by its users. Article by VK3ACA, February, 1958

I would like to point out that the British Post Office has spent several thousand pounds on s.s.b. radio telephone installations, and whether he likes it or not, as a taxpayer he has contributed to several Government installations in this country, that I am aware of.

When I first took up this mode of operation, I was told by another Amateur that s.s.b. was a passing fancy, and would not last. I note he has purchased and is now operating a complete s.s.b. station.

It is not difficult to make s.s.b. sound like an a.m. signal, and the quality can be designed to be better than the average country b.c. station is able to provide to the public. It is also possible to receive s.s.b. with little strain on a regenerative detector as many s.w.l's. are doing. It has been proved consistently that s.s.b. provides a more stable signal, which under given conditions is easier to follow than a.m. signals. The outright statement that c.w. still has the edge on all these systems is open to debate. I have operated c.w. both commercially and for some time on the Ham bands, and was of the same opinion. However, after changing to s.s.b. Nov. '56, I have conducted tests and each time received better "S" reports for s.s.b. I attribute this to the frequency diversity effect of s.s.b., which has the "edge" on c.w. as far as selective fading is concerned. With s.s.b., the user is concerned with translating the audio spectrum to be used directly to a radio frequency to enable propagation; and the reverse frequency conversion from r.f. to a.f. should take place at the receiver. The use of a product detector or converter does help with the noise problem, because, operating correctly, it is insensitive to amplitude disturbances.

I would like to include the following table for consideration for pure tone signal modulating a.m.—

% Mod.	% Total Power in Carrier	% Total Power in Sidebands
0	100	0
25	97	3
50	89	11
75	78	22
100	66.6	33.3

i.e. one sideband, which is all that is useful with a.m., has only 16.65%

With s.s.b., no modulation, no power; 100% modulation is 100% useful signal on the air (like c.w.).

I would recommend that VK3ACA take a trip to some of the s.s.b. gang in Melbourne and see the system in use.

—V. J. Kitney, VK6VK, s.s.b.

PEAK POWER FOR S.S.B.

Editor "A.R.," Dear Sir,

I am afraid John Adcock, VK3ACA, in his article in "A.R." for February has made a major error.

In his summing up, para. 7, he says we are allowed a peak power of 100 watts. As an a.m. 100 watt transmitter 100% modulated by a sine wave runs 400 watts peak power, it is only fair to allow this same peak power for the s.s.b. transmitter.

An a.m. transmitter of 100 watts peak power would have a carrier power of 25 watts, and a carrier power of 25 watts is certainly not our power limit.

The comparison of a s.s.b. transmitter of 100 watts peak power against an a.m. transmitter of 400 watts peak power by VK3ACA certainly illustrates the effectiveness of s.s.b.

Anyway, the proof of the pudding is in the eating thereof.

—Barry White, VK2AAB.

QSL CARDS

BY E. W. TREBILCOCK,* BERS195

During my 30 odd years' association with Amateur Radio, the humble QSL card has always fascinated me, for reasons more than one. The most important of which is the fact that it is a confirmation in writing of a contact made or a report received. (I am a firm believer in the long established line of thought and action, by a majority, that all initial contacts on a particular band, using a particular mode of emission, are worthy of a QSL card.)

To me a QSL card is more than a mere piece of "wallpaper". (I don't think the term "wallpaper" does justice to a QSL card, anyway.) A QSL card is a picture, portraying the thoughts of man and woman in layout, wording and color schemes. It is an aid to acquiring of world-wide geography knowledge and its passage from point to point provides many a philatelist, such as my son and myself, with an assortment of postage stamps, many of which would be hard to obtain locally. Above all things, a QSL card helps to set the seal of friendship established between peoples of various races, colors, and creeds in some 260 odd countries of the world.

As an added interest, I recently made a careful analysis of just how well (or otherwise) a QSL card is "filled in" with detail by the station operator concerned. I used my inward stockpile for June (90 QSL cards) plus the first 10 QSL cards received for July of 1957, and from the data available I obtained the following interesting results:—

- 95 of the QSL cards bore my call sign.
- 78 were dated.
- 74 mentioned the input power used.
- 73 gave the type of aerial.
- 72 listed the type of receiver.
- 71 mentioned the frequency band.
- 60 quoted the time of the logging.
- 54 indicated the mode of emission (c.w. or phone).

Looking at the results obtained, it is obvious to me that far too many operators spoil their good intentions when QSL-ing, by omitting to include some (or all) of the eight details listed in the previous paragraph. Three facts amazed me, viz.:—

- 5 of the QSLs did not include my call sign.
- 2 of the QSLs omitted 7 of the 8 details listed above.
- 46 of the QSLs did not contain an indication whether the QSL was for a c.w. or phone report.

It is my considered opinion that five of the details listed above are a "must" insofar as filling out the QSL card is concerned. The five in question are as follows: Call sign, date, time, frequency and mode. I venture to suggest that any QSL card which lacks any one, or more, of the five "musts" is not a QSL card at all, and is therefore worthless to the recipient. The cards are especially worthless from the point of view of those who claim the many and varied world-wide certificates of merit now available to tx men and s.w.l's. alike.

I suggest that all who read this article, and who have time on their hands, select 100 of their most recent inward QSL cards, analyse same along the same lines as I have done, and see how your results compare with mine.

When filling in your own QSL cards for dispatch to the other fellow, give positive thought to completing those eight details (especially the five "musts") I have so often mentioned in this article, and so make your QSL card one worthy of all it represents and a credit to the man (or woman) concerned.

* 340 Gillies St., Thornbury, N.17, Vic.

CONVENTION AT URUNGA

The VK2 North Coast and Tablelands Zone will be holding its Ninth Annual Convention at Urunga during the coming Easter week-end and all Amateurs, associates, XYLs, friends, etc., are cordially invited to join us for a very pleasant week-end. To defray expenses a registration fee of 15/- for gents, and 2/6 for ladies will be collected.

Accommodation is available upon direct application, or to Mr. Brian Clarke, VK2ZCQ, of P.O. Box 8, Bellingen, and I would advise you to book early to avoid disappointment. For the information of the "regulars" the Pilot Guest House has closed down. The available accommodation is as follows:

(1) Ocean View Hotel, Urunga, approx. 37/6 per day or £11/11/- p.w.
(2) Guest House, Mrs. Lee, Bonville St., 30/- day or £8/8/- p.w.
(3) Flats from £8/8/- to £16/16/-, depending on size.

A deposit of £1 per person is required for the Hotel and Guest House, but it is variable for the flats.

The tentative programme is as follows:

Friday, April 4—

8 p.m.—General get-together to discuss W.I.A. affairs or similar topics.

Saturday, April 5—

10 a.m.—Registration and ragchew.
3-5 p.m.—Gerry Challender Remembrance Contest on 7 Mc. for portable or mobile equipment—non-mains powered.
3-5 p.m.—Heats 144 Mc. Blindfold Tx Hunt.
7.15 p.m.—144 Mc. Fox Hunt.
8 p.m.—Social evening. 18 watter and perhaps an outline of W.I.C.E.N. activities, films.

Sunday, April 6—

10 a.m.—144 Mc. Transmitter Hunt.
11.0 a.m.—VK2WI broadcast.
11.30 a.m.—144 Mc. Tx Hunt.
3-4 p.m.—All-band Scramble.
3-6 p.m.—Heats and finals 144 Mc. Blindfold Hunt.
8.0 p.m.—Prize-Giving Concert and films.
10.30 p.m.—Disposals Auction, supper and ragchew.

Transport to Urunga is by road or rail, and by air, via Coffs Harbour.

The road to Urunga from Sydney is now sealed except for a maximum of 16 miles which even may be completed by Easter. If you desire to come by plane, please advise the writer in ample time to arrange transport between Coffs and Urunga.

I look forward to seeing a bumper crowd.

—N. A. Hanson, VK2AHH, West Kempsey.

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W.I.C.E.N. NOTES

Arrangements are now well in hand for printing Authorisation Cards. Cards will be issued by Federal Executive through the agency of your Divisional W.I.C.E.N. Co-ordinator. Hence if you wish to be in the first distribution now is the time to register.

Obtain full details from your Divisional Co-ordinator and make sure you fully appreciate the obligations imposed by membership of W.I.C.E.N.

Reports being received from all Divisions indicate a very gratifying interest in W.I.C.E.N. and impetus should increase as I.G.Y. activities expand.

During the year interesting and meaningful tests will be arranged for W.I.C.E.N. networks.

Readers interested in W.I.C.E.N. activities are advised to index these notes for ready reference. Apart from continuing publication of our own rules, data regarding overseas activities bearing on subjects of interest to us will be included.

Operating Procedure continues.—

2.11 When a station is called, but is uncertain of the identification of the calling station, it shall reply immediately by transmitting: "This is . . . (giving its own call sign) Say again your call sign."
2.12 The responsibility of establishing communication shall normally rest with the radio station having traffic to transmit.
2.13 Stations should make use of relay by another station, if unable to contact control direct. Stations should at all times be ready to act as a relay centre.
2.14 When a control station is called simultaneously by several stations, the control station shall decide the order in which such stations shall communicate.
2.15 Should it become necessary to suspend work, e.g., because of repairs or adjustments of apparatus, a station shall, if possible, inform the control station beforehand, followed by the time at which it is expected that communication will be resumed.
2.16 When transmission is again possible the station shall so inform the control station.
2.17 When a station is unable to establish communication due to receiver failure, it shall transmit its traffic preceded by the phrase "I am transmitting blind."
2.18 Messages should be transmitted at dictation speed. As a guide, the operator may write the message as he transmits it.
2.19 Each station shall listen to all communications on its network, and shall be responsible for rendering communications assistance to other stations as required, permission being first obtained from the control station.
2.20 Each written message shall be read prior to commencement of transmission in order to eliminate unnecessary delays in communications.
2.21 Transmissions shall be conducted concisely in a normal conversational tone; full use shall be made of standard phraseologies as prescribed.
2.22 The Phonetic Alphabet shall be that recommended by N.A.T.O.
2.23 The pronunciation of numerals shall be as follows: 1—WUN, 2—TOO, 3—TH-REE, 4—FOW-ER, 5—FIFE, 6—SIX, 7—SEV-EN, 8—AIT, 9—NIN-ER, 0—ZE-RO.

SILENT KEY

It is with deep regret that we record the passing of:—

Jack Groves, 20/12/57, Member Victorian Division.

BOOK REVIEW

U.H.F. TUBES FOR COMMUNICATION & MEASURING EQUIPMENT

By Members of Philips Electron Tube Division

With use of the u.h.f. bands increasing every day, all Amateurs should be conversant with the latest technique in use on these frequencies.

This book covers a representative range of tubes, circuits and layouts to suit operation in the 300 to 10,000 megacycle spectrum. Both transmitting and receiving tubes are included, the latter receiving thorough attention with a discussion on grounded grid r.f. circuits and standard noise sources. Transmitting tube data covers disc-seal triodes, reflex-klystrons and u.h.f. triodes of standard construction.

Definitely a book recommended to all Amateurs interested in 288 and above.

Our copy from Messrs. Philips Electrical Industries Pty. Ltd., Philips House, 69-73 Clarence Street, Sydney. Price in Australia, 13/-.

TUBES FOR COMPUTERS

By Members of Philips Electron Tube Division

The electronic tube, in its function of an inertialess switch, is one of the essential parts of an electronic computer. The tubes described in this book are specially designed for this use.

As well as comprehensive data on each of the tubes, many typical circuits are published. The data is divided into two sections, one for high speed computers up to the rate of one million units a second, and the other for lower speed computers. A chapter on constructional practice is included.

This book is recommended as a companion to "Analysis of Bistable Multivibrator Operation".

Our copy from Messrs. Philips Electrical Industries Pty. Ltd., Philips House, 69-73 Clarence Street, Sydney. Price in Australia, 13/-.

TUBE SELECTION GUIDE

Compiled by Th. J. Kroes

This handy book enables the user of electronic tubes to quickly determine preferred tube types.

A number of tables are included, grouping the tubes according to their most important electrical properties.

The book is most comprehensive in its coverage, and includes data on receiving, transmitting, microwave, industrial, and cathode ray tubes.

Our copy from Messrs. Philips Electrical Industries Pty. Ltd., Philips House, 69-73 Clarence Street, Sydney. Price in Australia, 13/-.

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YL CORNER

ELECTRONIC FANTASY

Once upon a time there was a city slicker, the image of a pirate, a genuine parasitic element, a dud who had gone soft. He stole a frequency, he stole a call sign, and then he stole the band. He also tried to steel tower and antenna. He was after plate and crystal so he used lines of force to blow up the front end and break-in to kilocycle hobbyist. Kilowatt? Well to kill a radio ham whose junk box was full of such things. The ham became a resistor and strongly impeded the city slicker with a positive charge. Both became heated, the ham made a number of turns and coiled himself up to try to get out of the city slicker's range. The city slicker was a type-free from restrictions and left his mark 2 after using a high voltage probe, whereupon the resistor became a bleeder, but fortunately it was only skin effect.

It was then a case of up and atom and sparks flew in all directions. The ham slugged the city slicker with an iron core, deflecting him from his normal path. The city slicker tried to choke the resistor who then neutralised him with a by-pass from a bottle. He felt his pulse which was at zero beat, but he didn't have enough energy to discharge this dummy load as his useful power was now negligible. The city slicker, who was an all-round-looker, then revived and the ham had to stand up to another battery of charges.

The city slicker couldn't get a bearing so he jumped the air gap, hopped on a grounded grid and went for more grid drive, then cycled across the earth to a ground plane and with a call, sign and a wave he took-off making a thermionic emission with a space charge.

The ham finished up with a sore tooth and in addition to losing a megacycle he also lost sink and lost the band.

VALVE DATA

6CB6

SHARP CUT-OFF PENTODE

The Radiotron 6CB6 is a sharp cut-off pentode of the miniature type designed for use as an intermediate frequency amplifier at frequencies up to about 45 Mc. and as an r.f. amplifier in the v.h.f. television tuners.

The valve features a very high transconductance (6,200 μmhos) combined with low interelectrode capacitance values, and is provided with separate base pins for grid No. 3 and cathode to permit the use of an unbypassed cathode resistor to minimise the effects of regeneration.

Base: 7-pin miniature.

Socket connections:
- Pin 1—Grid No. 1.
- Pin 2—Cathode.
- Pin 3—Heater.
- Pin 4—Heater.
- Pin 5—Plate.
- Pin 6—Grid No. 2.
- Pin 7—Grid No. 3, Internal Shield.

Electrical Data

Heater Voltage	6.3 volts
Heater Current	0.3 amp.

CLASS A1 AMPLIFIER

Maximum Ratings:	
Plate voltage	300 max. volts
Grid No. 2 (screen) voltage	150 volts
Plate dissipation	2.0 max. watts
Grid. No. 2 input: (for grid No. 2 voltages up to 150 volts)	0.5 max. watt
Peak heater - cathode voltages:	
Heater negative with respect to cathode	200 max. volts
Heater positive with respect to cathode	200*max. volts

* The d.c. component must not exceed 100 volts.

Typical Operation and Characteristics:	
Plate voltage	200 volts
Grid No. 3 (suppressor) connected to cathode at socket.	
Grid No. 2 voltage	150 volts
Cathode-bias resistor	180 ohms
Plate resistance (approx.)	0.6 megohm
Transconductance .	6200 μmhos
Grid No. 1 bias (approx.) for plate current of 10 μA	—8 volts
Plate current	9.5 Ma.
Grid No. 2 current .	2.8 Ma.

50 Mc. W.A.S.

Call	Cer. No.	Add. Cntr.	Call	Cer. No.	Add. Cntr.
VK2WJ	13	4	VK1AEZ	10	1
VK2PO	5	3	VK3XA	11	1
VK3VW	9	3	VK3GM	13	1
VK4RY	2	2	VK3ACL	14	1
VK4HR	4	2	VK3ZD	16	1
VK5LC	1	1	VK2HO	17	1
VK5DW	3	1	VK2ABC	8	
VK3HR	6	1	VK2WH	15	
VK3HT	7	1			

AMATEUR CALL SIGNS

October, November and December, '57

NEW CALL SIGNS

VK—

New South Wales

2FK—T W. Kinsella, 115 Alice St., San Souci.
2HJ—H. E. Jacobs, 9 Whitton St., Griffith.
2PM—J S. Cuming, 8 Sorlie Port, Castlecrag.
2RJ—L. R. Baber, 1 Roslyn St., New Lambton.
2SZ—R. C. Cook, 127 New England Highway, Rutherford.
2UG/P—R W. Earling, 115 Commerce Street, Tarce.
2UO—J F Dalstead, 14 Barbara St., Fairfield.
2WY G H Simpson 19 Degnance St., West Tamworth.
2XI—B. Hannaford, 338 Chloride St., Broken Hill.
2AAA—A. W. Ballantine, 34 Finlayson St., Lane Cove.
2ABQ—F J. Caton, 23 Jeffrey Ave., North Parramatta.
2AEB—M. O Bested, 14 The Circle, Griffith.
2AFY—Central Coast Section of W I A., C/o. School of Arts, Mann St., Gosford.
2AJK—J. F. Regan, 28 Short St., Oyster Bay
2ALE—R. E. Lynch, 33 Tempe St., Stanmore
2APK—D. F Kleesewetter, East Camp, Cooma.
2ZCJ—C. J. Charman, 6 Wilson St., Murwellbrook.
2ZCK—I. M. McCosker, 122 Warialda St., East Moree.
2ZEC—E. G Clare, 5 Palla St., Griffith.
2ZEP—G. P Pez 9 Farnsworth St., Thornton.
2ZJF—B. J Foster, "Avoca", Biala, via Gunning.
2ZJV—J N Van Lear 10 East Crescent St., McMahon's Point.
2ZMN—N L Norman, 1074 Barrenjoey Rd., Palm Beach.

Victoria

3JS—B J Coles, 6 Sturt St., Essendon.
3NS—J E. De Cure, 425 St. Kilda Rd., Melbourne.
3PN—D. B. Schroder, 355 St. Georges Rd., Thornbury.
3XE—W. J Dennis, Marandee, Hexham.
3YG—G. E. Smith, 21 Hughes St., E Brighton.
3AIO—W R. Ion, 12 Bartlett St., Moorabbin
3AMI—D. Laws, 102 Darling Rd., East Malvern.
3ZDU—F. A. Auld, 14 Sargood St., Toorak.
3ZEF—J. V. Hudson, 46 Donald St., Highett.
3ZEG—T S. Gray, 87 Doncaster Rd., North Balwyn.
3ZEI—G. W Quirk, Burwood East P.O., Burwood East.
3ZEJ—G. J McDonald, 41 Norman St., Wendouree West, Ballarat.
3ZEK—D D Watson, Flat 1, 138 Kilby Rd., North Kew
3ZEO—M. J. Owen ,486 Burke Rd., Camberwell.
3ZER—R. W. Wilkinson, 6 Boyle St., Ballarat East.
3ZET—R. J. Abell, 87 Marshall St., Ivanhoe.
3ZEW—L. T White, Evelyn St., Hopetoun

Queensland

4DM—R J S. Davis, Dept. of Civil Aviation, Longreach.
4JG—J. D Griffin, 14 Aubrey St., Camp Hill, Brisbane.
4KN—C. F. Peddell, 137 Belgen Rd., Wavell Heights.
4MU—E. H. Zahme., Finch Hatton
4QJ—G C. Jenkins, Bowen St., Roma.
4RC—Brisbane Amateur Radio Club, 30 Hawthorne St., Enoggera.
4RG—R. D. Grandison, House 141, Mt. Crosby.
4US—R.A.A.F Squadron, R.A.A.F., Archerfield.
4XK—R. A. Collins, 150 Ashgrove Ave., Ashgrove.
4XO—W A. E. Flannery, Wishart St., Mt. Gravatt.
4ZBC—K. D. Campbell, 34 Evadne St., Graceville.
4ZBK—S. W. B. Kemp, Junabee Rd. Warwick.
4ZBO—C. P. O'Brien, Green St., West End, Townsville.
4ZDK—K J Dibble, 84 Imperial Ave., Morningside.

South Australia

5AG—A. G. Mulcahy, 25 Hart St., Semaphore.
5GV—R. C. Grivell, 16 Silver St., Clearview.
5JR—B A. Endersbee, 15 Holme Ave., Lower Mitcham.
5ND—L. K Metcalf, 60 Castle St., Edwardstown.
5NE—G F Barham, 43 East Point Rd., Fanny Bay
5OS—M. J Brunger, 39 Rowlands Rd., Hilton.
5TK—T S. H Kent, Section 2, H25-27 Finsbury Hostel, Pennington.
5TM—R D Martin, 15 Henry St., Croydon.
5XY—C G Luke, 16 Kennaway St., Tusmore.
5ZAB—H A Fisher, 17th St., Renmark.
5ZBQ—A B Hollebon, 26 Nelson St., Port Pirie.
5ZDA—H Dreimann, 28 Days Rd., Croydon.
5ZGW—G. Wilde, 112 George St., Norwood.

Western Australia

6SM—M. H. Saw, 28 Auborough St., Double View.
6WD—W. F. Duns, Box 15, P.O. Hyden.
6ZAN—R. J. Skevington, 3 Rose Ave., South Perth.
6ZAY A. M. Austin, 6 Endersbee St., Merredin.
6ZBG—N S. Gardiner, 24 Frederick St., Midland Junction.
6ZBK—L. G. Rock, 36 Essex St., Wembley.
6ZBS—N A. Stocker, Flat 8, 115 Stirling Highway, Nedlands.

Tasmania

7JB—J C Batchelor, 39 Willowdene Ave L.W.R., Sandy Bay.
7MF M. F McGinniss, Cable Stn. Naracoops, King Island.
7XB—E. Carruthers, 292 Park St., Nth. Hobart.

Papua-New Guinea and Other Islands

9BB—M. B. Bonser, R.R.S. R.A.F. West Island, Cocos-Keeling Group.
9VG—H. A. Vinning, C/o. Dept. of Posts and Telegraphs, Lae.
9XM—J. W. Davey, Christmas Islands, Indian Ocean.

Antarctica

0BG—B. G Cook, Mawson.
0DA D. A. Brown, Mawson.
0HK—H. Knox, Macquarie Island.
0IJ—D. R. Twigg, Mawson.
0RB—R. A Borland, Mawson.
0RO—R. E. T Oldfield, Mawson.
0TC—T. J. Cordwell, Macquarie Island.

CHANGES OF ADDRESS

VK—

New South Wales

2DB—R. A. Biddle, 533 Merrylands Rd., Merrylands.
2VA—A. W. Bennett, 63 Denning St., South Coogee
2ACE—L. Brennen, 188 Forsyth St., Wagga.
2AED—E. Colyer, 57 Mt. William St., Gordon.
2AGG—A. K. Gee, Lot 14, 20 Larra St., Yennora.
2AHP—H. J. Pickett, 9 Crane St., Homebush.
2AIK—C. T Horne, 34 Lorna Ave., Nth. Ryde.
2AIZ—B. G. Powell, 63 Lucas Rd., Burwood.
2ALZ V J Nugent, 73 Herbert St., Tumut.
2ANS—K. H. Vaskess, Tackwells Rd., Castle Hill.
2APD—R. P. R. Drummond, 291 Ernest St., North Sydney
2ATA—P. A. Tavares, 2/127 Mount St., Coogee.
2AUP—K. Postler, 24 Birnam Gr., Strathfield
2AWM—T. S. Mayne, 16 St. Aidan Ave., Dundas.
2AXH—W. H. Hannam, 23 Merley Rd., Homebush.
2AXS—R. R. Smith, 116 Northcote St., Earlwood.
2AZE—G. R. Stewart, 42 Emma St., Leichhardt.
2AZQ—L. W. Cook, 31 Long Ave., Nth. Ryde.
2ZBY—J. T. Jarrott, 23 Douglas St., Stockton.
2ZDT—C. J. Jirsa, 5 Cook Ave., Canley Vale.

Victoria

3CC—H. M. Bain, 28 View St., Pascoe Vale.
3DE—D. E. Hale, 19 Denman Ave., Glen Iris.
3EQ—N. Gee, 133 Skene St., Warrnambool.
3MJ—W. L. Matlers, 151 Neale St., Bendigo.
3NE—E. P. Nelson, 34 Washington Ave., East Malvern.
3NI—N. R. Bouse, 262 Elgin St., Carlton
3NR/T—N. G. Roberts, 14 The Ridge Tally Ho.
3QN—P. E. Maplestone, 42 Berkely St., Huntingdale
3WQ—C. C. Chirnside, 8 Blake St., Caulfield.
3AEA—G. G. Whitemore, Lot 38, Beverley Rd., [redacted]
3AFP—J. H. Power, 133a Gregory St., Ballarat.
3AJV—K. G. Avery, C/o. Officers' Mess, R.A.A.F., Tottenham.
3AKZ—A. K. Head (Dr.), 6 Duffryn Place, Toorak
3ANE—R. Longworth, Station Barry Lane, Melbourne; Postal: 19 King St., Melbourne.
3APX—P. X. Daview, Police Station, Romsey
3ARK—F J. House, 7 Coates St., Moorabbin.
3ZAL—R. A. Foot, 43 Munro St., Ascot Vale.
3ZAT—D. D. Tanner, 20 Maude St., North Balwyn.
3ZCG—W. G. Francis, 30 Windsor Ave., Moe.
3ZEP—D. C. Paton, Station: 49 Havelock Rd., Hawthorn; Postal: C/o. Mrs. R. C. Francis, 4 Torring St., Hawthorn.

Queensland

4AP—A. Guilford, 95 Brighton Ter., Sandgate
4CJ C. W Marley 2 Lynch St., South Mackay.
4DR—L. G. England, 115 Barclay St., Deagon.
4ND—N. D. Dangerfield, Eighth Ave., Home Hill.
4YK—W. A. Bath, Norbiton St., Geebung, Brisbane.

South Australia

5IW I. B. Wall, 311 North East Rd., Hampstead Gardens.
5KQ—F T. Park, 10 Almond Gr., Glandore.
5KY R. T Mardon, 5 Jervois Ave., Murray Park.
5PM—J B. Porter, 44 Burbridge Rd., Brooklyn Park.
5SR—R. Short, 58 Victoria Ter., Hawthorn.
5VR—W. D. Randall, 12 The Strand, Largs North.

Western Australia

6BH—B. G. Hudson, 144 Brighton Rd., Scarborough.
6HK—D. E. Graham, Flat 31, 114 Terrace Drive, Perth.
6UP—F. H. Turner, 15 Temby St., Cannington East.
6WJ/T W Jacobs, Flat 509, 138 Adelaide Ter., Perth.
6ZAJ—B. W. A. Jacobs, 20 Williams Rd., Narrogin.
6ZAO—R. G. Smith, 17 Milford Way, Nollamara

Tasmania

7JO—J G. Oliver, 18 Percy St., Devonport.
7PM—P D Mulligan, Radio Link, Stanley

Papua-New Guinea and Other Islands

9BS—R. A. Sutherland, Dept. of Civil Aviation Quarters, Honedobu, Port Moresby.
9NT -N. T. Casey, C/o. Dept. of Posts and Telegraphs, Rabaul, T.N.G.

CANCELLED CALL SIGNS

VK—

New South Wales

2DD—A. Davis-Rice.
2NB—G. R. Barham. Now VK5NE.
2QJ—G. C. Jenkins. Now VK4QJ.
2SU—C B. Jones.
2AAG—W W Moss.
2AAK E. A. J Kyle.
2AMN—R D. Martin Now VK3TM.
2AQA—18th L.A.A., Regiment R.A.A.
2AQM—Dubbo Postal Amateur Radio Club.
2ZBC—F. J. Caton. Now VK2ABQ.
2ZBD—J. S. Cuming. Now VK2PM.
2ZCB—L. R. Baber. Now VK2RJ.
2ZCD—J. F. Dalstead. Now VK2UO.
2KN—C F. Peddell. Now VK4KN.

Victoria

3EI—J. Allan.
3JF—J C. Batchler Now VK7JB.
3WB—R S. Beckett. Transferred to N.S.W.
3AHS—A G. Svenson. Transferred to N.S.W.
3AJL—W R. Adey (Dr.).
3ARG—R. Graemer
3ZBC—J. T. Jarrott. Now VK3ZBY.
3ZCA—R. J. Skevington Now VK6ZAN.

Queensland

4PJ—P J. Chapman.
4YA—W. A. Young
4ZAN—R. D Grandison. Now VK4RG.
4ZAU—W. A. E Flannery. Now VK4XO.

South Australia

5DT—B. Hannaford. Now VK2XI.
5GZ—Penfield Radio Club.
5IA—R. E. Langfield.
5TI—J. C. Torr.
5ZBN—B A. Endersbee. Now VK5JE.
5ZBR—K. L Metcalf. Now VK5ND.
5ZCK—R. J Kreig.
5ZDX—R. C Grivell. Now VK5GV.
5ZXY—C. G. Luke. Now VK5XY.

Western Australia

6UG—J. H. White.
6ZAG—J. Kitchen.
6ZAM—M R. Meharry.
6ZAQ—D. A. Meadowcroft.
[redacted]
7RC—R C. Ireson

Papua-New Guinea and Other Islands

9AJ—E. L. Lerpiniere.
9DS—D. B. Schroder. Now VK3PN.

Antarctica

0CJ—C. J. McNaughton.

PERMITS GRANTED FOR TELEVISION EXPERIMENTS

2AMG/T—D. M Finn, 68 Augusta St., Leichhardt. N.S.W.
7RN/T—R. D. C. Nicholls, 30 Pearl St., Wivenhoe, Burnie, Tas.
7SF/T—S. F. Medford, 4 Mark St., Hillcrest, Burnie, Tas.
9AT/T—E. J. Roberts, Station: No. 9 Donga, 2nd St., Lae; Postal: R.T.C. Office, Dept. of Posts and Telegraphs, Lae.

DX

Frank T. Hine, VK2QL
30 Abbotsford Road,
Homebush, N.S.W.

Am now back again to all the "chores" after a delightful holiday in Adelaide, and strange as it may seem there was not much talk of DX when with any of the VK5 boys I had the pleasure of visiting.

Some good DX has been on the bands if you were fortunate enough to be on at the time, but no two days were the same. Some very short skip has been evident at night in Eastern Australia and the DX stations have also been complaining of the short skip in their areas. Many strong W signals have been heard on the long path in the mornings.

Entertained W7KVU for a few hours whilst he was in Sydney and he was most interested to be on the air from "down under" and hear W signals. Some very interesting information came out of our talk, one of which is the way the leading DX boys in the States operate and have themselves organised. If one of them is on the band and hears something worthwhile in the line of DX, telephone calls start to get the others on the air. These are not local calls, as they can become coast to coast. W7KVU has made calls of over 1,200 and up to 1,500 miles himself and told of one instance when he rang a W0 asking him to zero beat a VQ1 he was working, receiving the reply I am zero beat, so John did not hear that VQ1. So now you know how the W stations appear in profusion when something worthwhile shows up. Most of them were probably asleep.

NEWS AND NOTES

The reference to ZL1ABO in last month's notes is to be corrected to ZL1ABZ. If you need the Kermadec Is., and who doesn't, ZL2GX or VK9AD may be able to arrange something for you even cross band. Generally he listens for a.m. only, but can read slow c.w. Power is 100w. and gets out quite well.

Activity from FW8AA has temporarily ceased as he is in hospital at Noumea and will be in Noumea for some time (2ACX).

ZL1CI, the old 80 mx stalwart, has worked over 70 and heard 140 countries on 3.5 Mc.

Although it is shown as acceptable to the A.R.R.L., the Aaland Is. is not being allowed for Australian DXCC credit (3CX).

There is renewed possibility of activity from the Maldives as there is a change of command taking place, and the new C.O. is an ex-Amateur.

2AGH overheard an HR station telling a DX station that the HR Bureau was not functioning at present and that many cards had been "lost".

A strange call appearing on the 14 Mc. band is FK0AD. Gave his QTH as Chesterfield Is.

JT1AA is now active on 21 Mc. The first QSLs from this station have arrived in Australia, but were only four in number.

The XYL of JT1AA is on 14 and 21 Mc. with the call of JT1YL.

HK0AI has been on from San Andrea Is.

PY1CK/0 has been active on 14 Mc. phone, PY2CK often acting as the link.

UP0L7 is the call of the Russian station in the Amateur bands operating from the North Pole (2EG).

VK0AB has now ceased operation from Mawson. Had 70 countries confirmed and had made W.A.S. (3EG).

CE3ZO has now QRT and returned and is operating as G8ZO.

ZL1ACV is operating from Antarctica as ZL5AC and plans operation on all bands.

VK9AD is having difficulty in getting his cards. Sez there are hundreds somewhere for him. He asks that all his cards be routed through the VK2 Bureau and that if a DX station seeks his QTH, tell him it is Norfolk Island via Australia, as many cards are being returned to the DX station if Norfolk Island only is shown as the address.

XV5A is W3ZA operating from Saigon. He expects to have 1kw. on s.s.b., a.m. and c.w., usual hours of operation being 0100z-0130z and 1000z-1130z.

FW8AA QSLs are reaching him OK via the OK Bureau. Have not heard Phan for some time.

VR3N is the first station to appear from the new "invasion" of the Pacific Xmas Is.

CE9AG is active from Easter Is. on 14, 21 and 28 Mc. phone (2JZ).

ACTIVITIES

3.5 Mc.—2AGH ZL1ABZ* 2QL ZL1ABZ*

7 Mc.—9AB FA8RJ*, DJ2HC*, VE3AW*, JA1AEA* 2AIR OX3DL* 2QL G, ZC4IP*, 2AMB KA2FF* Ian Thomas JA1AMZ, B. Smyth JA1MZ. BERS195: DL6XT, DU7SV, G3IZK, G5JU, G5RP, KR6AK, OH2EC, OH-5RH, OH7NF, OQ5RU, SM5BFE, UA1BE, UA-1YH, UA4FE, UA0CN, UB5QF, UC2KAD, UF-6KAA, VS1CN, VS1FJ, VS2DF, YO6XU.

14 Mc. C.w.—0AB UR2KAA*, LZ1WD*, UA-6KCE*, UP0L7* 3V8AB*, TI2VA*, FF8AC*, CN8JX*, UA3KBA*, OK1KTI*, UP2KBA*, UN1AE*, UB5KAW*, UI8KAE* 2ACX LA-2JE/P* ZC3AC*, VQ8AS*, HA5AM/ZA, HK-0AI, HV1CN*, 2AGH SV0WR*, CR8AC* EA-9BM*, FB8XX*, PJ3CE* UN1AN*, LZ1KSZ*, II1ADW*, ZC3AC*, HS1C*, ZB2I*, VS9AJ*, UA-0KDD*, CN2BE*, OA4FA*, UB5KAA*, MP-4BBL*, UA4NB*, KM6BJ*, IT1TAI*, IS1FIC*, LJ3D*, VR3N, EA8CE, FK0AD, EA8AU, 9K-2AX, OY5ML, FL8AC, FB8CE, UC2KBR, UP-2AT, HL9KS. 2AIR CT3AB*, KP4AZ*, JT-1AA*, CR8AC*, XE1BY*, XW8AE*, HS1C*, VK0KT*, ZC5RF*, UL7HB*, 3V8KS*, VS9AJ*, FL8AC*, HC1JW*, KC4USA*, ZC5AB*, XW-PZ1AP, CR8AC, UL7KBA, 5A1TV, CR8BX, VK0TC, HE9LAE, HL9KS, CS9AD, VQ5GJ, VQ-4KRL, HZ1VB, VQ3CF, VP6PJ 2JZ* UA-0KFD* UA6KAE*, VQ3CF*, VQ8AP* SV0WR*, VK0AB*. 5GM VU2DR*, EA5FK* 4X4JT*, UP0L7*, UA0KKB* 5RK SM8BYG/MM*, JA2AE* Ian Thomas KR8DA, KR6ES BERS-195 HZ1AB, HZ1VB, LX1AS, OD5LJ KP6AL, OQ5IE, MP4BBE, OY2M PY4AO PI1RRS, SU1DM, UJ8AG UH8BA, VU2NA, VO1DX, ZC-5AB, 3V8AO, 4X4JU.

14 Mc. Phone—2ACX PY1CK/0*, CR5AC*, HV1CN* 2AGH VK3RG*, VR3A*, VS.JR*, 15FL*, ZK1BS*, ZK2AD* 2AMB TG9AL*, VK0AS*, HC1HL*, VR2DC*, VK9AD*, ZL-5AC*, CE3HL, BV1US, FU8AD 5A1TV, OA-4DMG, OA4IGY YU2DB, VR4JB, HH2CL, YU-2RM, KP4GN, PY2AJN 2JZ VP9DC* YV-5ABH*, HH2HH*, EA8BY*, HZ1AB* ET2US*, VK0AB*, CE0AG* 3A0M CT1PK*, G3ML*, HH2CL*, HH2R*, KR6JN*, KR6LB* VK9AD*, VR2DA*, VR3A* 4DO BV1US* 15FL*, ZD-6DT*, 4S7YL*, CE3HJ*, XV5A. 5GM VK9YT*, VR2DA*, VK0KT*, ZS6UR*, MP4BBC*, VK-0TC*, KC4USA*, YS1JR*, VS5JL*, KR6DO*. 5WP 4X4DR*, 4X4GB* CO8JK*, HV1CN*, SV1AE*, FA9UP*, EA8BY*, SV0WP*, OD5BV*, YV5AG*, ZE7JR* OA4IGY*, CN8MM*, MP 4KAS*, 5A1TB*, VS5AD* B. Smyth TI2MG TI2ACA, TG9AL, VR3A, VR4JB VK0KT, ZD-6DT, 5A1TV HP3FL, VU2AV, LU2HAE, YV-

Does this make you drool a bit? It is Dick KV4AA seated in his shack. He has two of everything, drivers, finals, s.s.b. exciters, etc., plus 3kw gas generator. On the top shelf spare electronic key, speakers, ant. couplers. Middle HT-32, B, and W 51SB, Collins 310-B HT-33 amp. Ranger. Table: Audio keying speaker, SX-101, E1-bug controls, 75A-3 control panel (selects antennae, switches drivers to any final, etc., etc.), Johnson KW. The antenna farm consists of a 3 element beam 75 ft. up on Vesto tower for 14 Mc., 3 element beam 40 ft. up on pole 21 Mc.; 80 metre zepp takes care of 1.8, 3.5 and 7 Mc. He is fairly active and you will hear him on 14 c.w. most days 1030 to 1200 GMT. DX is fine and he has [redacted] confirmed (one behind W1FH!).

8AI*, KX6AF*, SV0WR*, OQ5EH* 2AMB KR8QW*, YV5GO* LU8DJX*, CE4AD*, CX-5CO*, VS4BA*, JT1AA*, HS1C*, VK0KT*, ZC-5AB*, VK0AS*, MP4BBL, VR5AZ, HL9KS, HL-3AP, VQ3CF, YJ1DL, FB8CD, PJ2CC. VS9AJ, KG1HL, 9K2AN, ZC5AL, ZC5RF, VQ6LQ. 2QW. 4X4GY*, MP4BBE*, HA5BO*, HA5DH*, OH-2YV/0*, OX3DL*, HS1C*, ZE2JD*, UL7KBA* XW8AE*, XV5A* CT3AB*, CR8AC*, HL3AP, HH2LD. UG6KAA, UG6AB, PZ1AP, VS9AJ, FL8AC 2QL: SV0WR*, VQ3CF*, XV5A*, HS-1C* XZ2TH*, FY7YF*, FQ8AP ZD2DCP, ZD-6DT, PJ2BA, HZ1AB, HZ1VR, VQ8AS, AP2AD, ZC3AC, VK9JF FB8XX, LX1DW, YK1AT, UD-6FA, UD6AM FB8YY 2ZE: UA3WV*, UB-5LK*, UC2CB*, UP2KCB*, LZ1KPC*, IT1TAI*, IT1PDN*, CN8BK*, CN8GV*, ZS6AQY*, CN 8CJ*, YV1AD*, YV5HL*, LU1NE*, LU8FBH*, KV4AA*, VK0AB* VP6PJ* ZC4FM* 3CX. ZC3AC*, KV4*, LU*, YV5GY* ZC4PT*, VQ-6LQ*, LU4ZD*, VQ4KPB*, VR5A*, HS1C*, LA-8JE/P*, VR3N, CR5AZ, FK0AD. 4DO UA-4FE*, UA9KCA*, UA0*s*, 15FL* UI8KAE*, UM8KAA*, VQ6LQ*, ZC5RF*, HC1JW*, SU-1IM*, BV1US*, XV5A*, VQ2AB*, ZC5AL*, XW-8AI*, SP5GN*, YO3ZA*, YO6XU* UB5KEP*, 4X4GY*, UL7GN, UO5KAA, CR9AH, CT3AB, 8CD, CN8MM, OA4IGY, MP4KAA, HC1FG XQ-5AG (see QTH). BERS195: BV1US, EA3GH, ZS5RB.

21 Mc. 2AGH OH2YV/0* 2AIR KL7* W* 2AMB OA4V*, FU8AD, VR2DF, VR3A. 2QL OH2YV/0*, YN1AA*, JT1AA*, ZC4IP* VQ-6LQ* MP4BBE*, VK9JF*, ZB2I 2JZ CN2BK*, UA2KAA* VS4JT*, DU1GF*, VK9BS* UQ 2AN*, FA8CF*, SV0WS* YU2ET*, ZB1GUH*, and Europeans* 2ZE GC3HFE*, HA1KSA*, SP2LV*, YO3ZA* and the regular Europeans.

28 Mc.—2AIR W*, 2QL W*, VE*, KH6*, 6XJ HP1QD*, CO2JK* HH2LD* VP5EM*, VP9DC*, HC1FS*, XE2FV*, 9G1CI* (midday, long path), G*, W*, VE*, GD*.

QSLs RECEIVED

A large and interesting batch of QSLs have been received by the VK2 gang during January, with increased confirmations for DXCC. 9AB VR3C. 2AOX HV1CN, SV0WR, ZS7C, 3W8AA. 2AGH YS1JR, UA4FE, UA0KKB CR-8AC, ZC4IP, FP8AS, UB5UW W6UOU/KS6 3W8AA, SV0WR, TG9AD. 2AIR W4FCB/KS4, HH2CL, UD6KAH, UP2AT, UA0QM, UR2AK, CT3AB, VP8CW 2AMB VK0AB 7 and 14

* Call signs and prefixes worked.
z—zero time—G.M.T.

Mc), HK7AB, CN8GL, LU8BAJ, FM7WT, FY-7YF, FA8CF SP6KBE FB8ZZ, EA9BK, EA-8CC, HC1HL, UB5UW, LA5Q, 3OW 3W8AA, UA1KAE, 8QL ZB1CR, HA5BI, JZ0PC, UH-8KAA, BV.US, UC2CB, UA0OM, UQ2KAA, 4X4DR, 4X4BX 9S4CH, ZS3AG, ZS3Q, W0UOU/KS6, KP6AL FP8AS, UA1KAE, UL7HB, UQ-2AQ, UM8KAA BERS195 CR8AC, 9S4DW, HR1JH, KZ5RF, PY1BFR UA4SF, UB5FD, ZD6RM, EI8BC/MM

QTH OF POSSIBLE INTEREST

HS1C—Box 1038, Bangkok.

VP8CW QSL via I.S.W.L.

VR5A Box 2 Tonga (3CX

HZ1VB Box 167, Jedda Suad. Arabia (4DO)

9G1CI University College Accra Ghana (4XJ)

XQ8AG—No. 7 Vanguard Station, C/o, U.S.A. Consulate, Antafogata, Chile.

I5FL—Box 90, Mogadiscio.

Before I finally wind up the cat and put out the clock, Hans 3AHH has asked me to pass on his 73 to all VK DXers. On my return from holidays there was a Xmas card and letter waiting for me. Hans gave no indication when he may be back, but as he holds a supervisory post in the I.G.Y. organisation on Ionospheric research, which is keeping him on the move throughout Europe, I should say that we won't see him until the end of the I.G.Y. task, although he hopes he may be on with something QRP in his travels. He is not out of touch completely as he gets his copy of "A.R." although almost three months old.

And so my thanks to the following, some of which is welcome 'new blood!' 2EG for his regular QSP of 5AB whilst Chas has been at Mawson, 2ACX who now has the fine total of 262c worked 2AGH torn between trying to watch the bands for the good ones and build a new tx 2AIR is wondering when conditions will stabilise (ask Hans Alan), 2AMB still able to dig out the occasional good one and pleased with the QSLs he is getting 2JZ who is trying a quad on 21 Mc and we welcome his first contribution 3OW waiting on three QSLs to confirm his W.A.S., 2ZR added two new ones for the month 3CX who is happy with his cross-band with ZL1ABZ 4DO who is having some QRI trouble, 4XJ who manages to scare up something satisfactory on 28 Mc., 3AOM whom we hope to see regularly listed on the page. 5RK for his QSP of 5GM and 5WF, BERS195 has now reached a total of 238 confirmations, Barney Smyth is interested in aerials, and finally we welcome to the page Ian Thomas of Clayton VK3.

D.X.C.C. LISTING

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call	Cer. No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK3ATN	26	204	VK9DB	31	161
VK4FJ	21	202	VK4WF	16	160
VK4HR	12	192	VK4RW	23	157
VK6RU	2	191	VK3JD	1	155
VK3BZ	3	176	VK4KS	9	152
VK3EE	10	163	VK6KW	4	150

Amendments

Call	Cer. No.	C'nt-ries
VK4DO	30	123

C.W.

Call	Cer No.	C'nt-ries	Call	Cer No.	C'nt-ries
VK4FJ	29	234	VK3XU	48	213
VK3FH	15	226	VK5BY	45	202
VK3KB	10	225	VK2EO	2	191
VK3CX	36	223	VK3YL	39	190
VK3BZ	6	222	VK6RU	18	176
VK4HR	8	218	VK5RX	23	176

Amendments

Call	Cer No.	C'nt-ries	Call	Cer No.	C'nt-ries
VK4DO	30	151	VK4RW	47	165

New Members

Call	Cer No.	C'nt-ries
VK2AIR	60	102

OPEN

Call	Cer No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK2ACX	6	239	VK3JE	12	210
VK4FJ	32	238	VK3ATN	69	210
VK4HR	7	233	VK3HG	3	201
VK3BZ	4	231	VK2NS	16	195
VK6RU	8	221	VK9DB	59	182
VK3XU	61	221	VK4RW	52	179

Amendments

Call	Cer No.	C'nt-ries	Call	Cer No.	C'nt-ries
VK4DO	15	175	VK4WF	40	165

PREDICTIONS FOR MARCH, 1958

VHF

Frank P. O'Dwyer, VK3OF
190 Thomas Street,
Hampton, Vic.

Unprecedented events marked the past month's activity on 50 Mc. VK5EF heard KH6, W0 and K0, VK4ZBF swapped calls with K6RNQ; VK2-3-4-5-7 worked into JA; auroral contacts from VK3 to VK2 and 7; KL7 heard in VK3. What more is required to set the gang in all States on edge, waiting for the next break-through to who knows where?

Here is the sequence of events from the information to hand. Jan 11, 1700 E.A.S.T. for about 10 mts. VK5EF heard KH6UL on 50.2 Mc., R4 S5 with quick flutter QSB on the signal, during the same period on 50.23 and 50.24 Mc. a W0 and a K0 were heard in quick QSB conditions but enough of the signals were received to allow confirmation of the prefixes. By 1713 E.A.S.T the signals had disappeared. VK5EF was using a 4 el. beam 45 ft. high with gamma match to co-ax line feeding into a 6BQ7 cascode r.f., 6U8 osc. mixer, 6SN7 cathode follower to 36 meg. i.f. through pre-selector to a 75A3 receiver. Unfortunately no transmitter was on hand to go back to the stations heard. Jan 23 at 1950 E.A.S.T. VK3RR (Horsham) contacted JA2ZW, the first recorded VK3/JA contact ever.

Feb. 2 had two openings, northern VK to JA and southern VK south. JA signals poured into VK4 for several hours and many of the local gang made their first JA contact on 50 Mc. VK4HM was apparently putting an excellent signal into JA going by the doppler which developed on his frequency. That is one feature of JA operating, they way their v.f.o. onto the station they call. At 1140 VK3 had a short opening to VK5 and while this was in progress VK7AB proceeded to contact JA1AXE at 1155. Each was R5, S5, to the other though they lost one another in the end after a good contact. With Doug. 7AB located in Hobart it will take a contact with Macquarie Island to give the JA's a longer distance. In the evening VK3 had an opening to VK5 and ZL with an extended opening to VK7. Again here many VK3s made their first VK7 contact. With so many signals coming in from the south, the VK3 beams were swinging madly from ZL to VK5 through VK7 and back again. During this period VK3OF sat on one signal (1908 E.A.S.T.) and identified it as VK0AA calling VK5MK. VK0AA having left Macquarie Island (replaced by 0KT) the query now is "was it JA0AA off the back of the beam". Was JA0AA one of those worked by the VK5 gang? During this same evening VK5 had an excellent opening to JA, the first ever once again. According to the A.B.C. News service the following morning, Col 5RO worked 11 and Reg 5QR contacted 4. Maybe others were in on it too.

Feb. 5—Gerry 5ZBN at 2047 E.A.S.T. heard a KL7 calling CQ VK or JA. A strong local signal made copy difficult at times, the signal also having a sharp scatter flutter/fade on it also. At 2100 on approx. 50.1 a similar type of signal appeared for a short period but the rapid QSB made identification impossible.

Feb. 8 at 1045 VK4ZBF listened to a signal which signed K6RNQ. Allan called to be answered as VK6ZBF, but after several efforts was correctly identified before the signals went out. It is not known whether signal reports were exchanged by each station, though the calls definitely were. Allan was using a mere 8 watts to a 2 el. cubical quad, his final being a 2E26. Receiver was a 6AK5-6J6 converter into a 5-6 Mc. Command receiver. Unfortunately while this was going on Allan was the only VK4 on the band. How about going QRO Allan? During this period the ZLs were steadily working across the Pacific to the west coast of W land. Once again both first, VK/W, ZL/W.

Feb. 10 in VK3 at 2145 E.A.S.T. weak signals from the north came up on the band, at 2210, Ian 3ALZ raised his first JA. Ian went on to work 4 more while the rest of the gang called in frustration to no avail. The first meg. of the band was full of JA signals to S7, but copy was difficult because of the sharp QSB flutter coupled with language difficulties. A terrific dog-pile developed on Ray 3ATN (Birchip) while 3ZCW (Ouyen) appeared to be in the thick of it also. General consensus of opinion was that it was a "scatter" type of opening.

Feb. 11 provided an anti-climax as well as some amusement for the VK3 gang with an excellent auroral opening. With VK2-3-5-7 all beaming south at the aurora, VK7AB/VK7LZ broke the ice with an Intrastate contact, followed by VK7/VK3, VK7/VK2, VK3/VK2, with VK5 calling VK7 though no sign of him in VK3. Signals between VK7/VK3 peaked 9 plus at times allowing phone contacts, but for the most part c.w. was the obvious choice. Signals such as those on the band had to be heard to be believed. All d.c. characteristics were lost, c.w sounding like a square toothed buzz saw gone mad. Even strong S9 plus local signals developed the auroral effect, ground waves being conspicuous by their absence. VK3/VK2 contacts were by phone, difficult copy at times, hope the Z call boys are out to get their full tickets, they would get a lot more contacts under auroral or fringe conditions. Col 7LZ alerted Len 7BQ by landline whilst Doug 7AB started off on phone without any method of keying, but speedily rectified that, it did not take him long to pound brass.

SKEDS AND THOSE TO LOOK FOR

VK0KT, Macquarie Island, runs automatic c.w. on 50.19 Mc., beaming north, calling and listening in a sequence of 5 minute periods on Saturdays and Sundays at these times E.A.S.T: 1200-1230, 1500-1530, 2000-2030, 2100-2130. Up and down the VK east coast various Hams are running skeds with KH6 and W around 0700 E.A.S.T. VS2DQ on 51.8 Mc. is looking for VK contacts so tune up that far if you can boys, while XE1GE just inside band edge, with high power and a good location is beaming at VK also. With so much interest being displayed overseas in the VK direction and conditions as they are, there should be opportunities for everybody before the band closes up. Of interest is an extract from a letter received from Vern 4LK. From JA2OW (Jan. 30) he has worked KL7, VE7, W6, 7, 0 on 50 Mc., all this taking place in the morning from around 8 a.m. to 8 a.m. Jap. C.S.T. (0700-0900 E.A.S.T.). JA3JJ, who does not work (spastic), has had over 100 contacts with the west coast of W land and Canada. Another first overseas was W1CLS to KH6UK on 50 Mc. on Jan. 28, believed to be a single hop contact (1930 G.M.T.).

VK8 appear to be out of all this (lack of news to date) but with the activity evident in South

Africa contacts should be made in that direction, while the hop to Ceylon and JA should not be beyond them. The success of Ian 3ALZ with his 30 ft. long yagi and approx. 80-90 watts input plus consistently operating on and watching the band shows the local chaps what is necessary to work the good stuff. The extra few d.b. gain in his antenna enables him to read signals which the average fellow can only beat with the b.f.o. if he hears them at all. Not only read them, but work them as well. Nice work Ian.

NEW SOUTH WALES

Meeting.—The monthly meeting of the V.h.f. and T.v. Group was held at Gore Hill Technical College on Friday, 7th February, at 8 p.m. The lecture for the evening was given by John 2ANF and was entitled "The Design and Construction of Mobile Equipment" John dealt with transmitters and modulators at length and also covered the important points concerning receivers, power supplies and antennas. A vote of thanks was moved by 2ZDF and carried by acclamation. The meeting then adjourned for supper, after which the balance of formal business was concluded.

DX Contact.—On 19th January Alan VK2ZAL made 2 mx contact from Sydney with VK5BC. The contact, which took place between 1400 to 1430 hours, was at good strength in both directions. The congratulations of us all are due to both these stations for this very excellent DX contact.

The Monthly Day Fixture, held on 19th January, was a treasure hunt. The fox was John 2ANF who had Roy 2HO with him. Eight mobile stations participated in this event which was won by 2OA with 6 points.

I.G.Y.—Following the launching of the first American Satellite on 1st Feb., the organisation set up by the V.h.f. and T.v. Group to assist the Sydney "Moonwatch" Group at Belfield, went into action. Results have been most satisfactory and we have been able to provide the Belfield people with the information service that they required.—2ER.

VICTORIA

Field Day.—The results of the Field Day on 15th Dec. are: 1st, 3ZAN at Pretty Sally, 35 pts., 2nd, 3VF, Kinglake, 23 pts., 3rd, 3ZET, Mt. Macedon, 18 pts. 15 stations were out in the field on 26th Jan. This was the best muster of portable stations for many years. Stations out were: 3KD Mt. Martha and Arthur's Seat (2 mx), 3OM Mt. Dandenong (1), 3VF Donna Buang (2, 1, ½), 3AFJ One Tree Hill (6, 1), 3AOG Arthur's Seat (2), 3ARY Red Hill (2), 3ATW Echuca (2), 3ZAE Kinglake (6, 3, 1), 3ZAV Mt. Barrabool (2), 3ZBJ Loch (6), 3ZBP, AHL Mt. Camel (2), 3ZBU Mt. Macedon (2), 3ZCG Bass Hill (2), 3ZCZ Lorne (2), 3ZFA Arthur's Seat (2, 1). Interest was added to the event when VK4BT came through on 6 and VK7LZ on 2 mx. Other stations on 2 were 3ATN, 3ZAW, 3ANQ, 5AW, 5CJ, and 5ZAG. During the afternoon Roy 3ARY was heard calling for assistance; he had become bogged. However, Garth 3ZFA heard him and was able to give some help. Les 3ZCN went to Mt. Buffalo but found that the location is unsuitable for v.h.f. work. Les says that any good positions are not accessible except to mountain goats! The next field day is on the 2nd of this month and Col 7LZ has promised to be on deck.

50 Mc.—New calls on the band recently include 3AFL, 3ZAE, 3ZBJ, 3ZCJ and 3ZEW. By the time these notes are printed, Lindsay 3ZEW will be operating from Hopetoun—on 144 Mc. as well. Interest is running high now because of the possibility of JA contacts. 3RR in Horsham has worked a JA and I have heard that VK5 and VK7 have also. 3ANQ at Warrnambool is active on 6 now—with a v.f.o. Eric's first station was a ZL so he is very impressed with the band.

144 Mc.—DX activity has dropped off a bit after the hectic holiday period. 3ZCN mobile using a halo antenna worked 5ZAG over a 175 mile path on 8th Jan. Les claims this as a record. Any challengers? 3ATN/3ZEE worked 7LZ on 12th Jan. Poor Col had to listen to the Birchip gang for half an hour whilst they discussed some proposed 288 Mc. activity with yours truly 3ZAQ. Sorry I kept you waiting Col, but maybe we can talk you into some one mx work too. A good break-through occurred on 8th Feb. when 5CJ came through into Melb. as well as 7LZ and 7BQ. Western district stations 3ANQ, 3AKR and 3AGV were putting very strong signals into Melb. on this evening too. Weather conditions were warm, gradually cooling, clear sky, bright moonlight.

New stations on the band are 3ZFG near Warrnambool (144.162 Mc.), 3ZFK Caulfield, and 3ZFF. 3ZEO and 3ZCZ have been staying at Pt. Lonsdale and Lorne respectively and have been running portable gear. Don 3PO and Ron 3ZER have struck trouble. Don temporarily blinded himself whilst using an arc welder and Ron was involved in a motor cycle accident. He was in hospital with a fractured hip but is on the mend now.

288 Mc.—3AJJ/T Lubeck has reported hearing signals on 290 Mc., believed to be those of 3ALK. Further checks over this 150 mile path are to be made soon. 3ZCN has his stabilised equipment working and has had a two-way with 3ZAQ—c c gear both ends. (Les was at Noble Park at the time.) Les will be operating from Ballarat on 288.175 Mc. Ron 3ZER may be on shortly with stabilised gear.

V h f Meeting.—The first meeting for the year was held on 15th Jan. David 3ZAQ was chairman in place of Herb 3JO who was on holidays and Boz 3OJ was Secretary. Details for the v.h.f. convention were discussed at length and the following results arrived at. The convention to be on 9th March (i.e. 9th of this month); the meeting place, the rooms at 1300 hrs.; the agenda to be a discussion of the Ross Hull rules and other v.h.f. matters that may arise. After discussion a tour of the ABV and HSV transmitting stations has been arranged. This last item has been arranged and will be at about 1630 hrs. For the convenience of the country gang, the date selected is a Sunday and the week-end is a long one—Monday 10th is Labor Day. Therefore all v.h.f. types wherever they be are urged to attend this function.

The meeting concluded with descriptions of 6 mx converters brought in by Jack 3ZAJ and Jock 3ZDG. Don't forget: 9th March, 1300 hrs. at the rooms. 3ZAQ.

SOUTH AUSTRALIA

Some visitors from VK3 recently in Ivan 3ZDV and Glen 3ZBJ, who operated on 2 mx portable, added some interest to that band. These boys dropped over because when they set out from home they found the urge to work some VK5s just too great so they came amongst us. Good idea too, and their reception here livened things up for a day or so, and all were pleased not only to work them on 2 and 6 mx, but to see them when they did the rounds. Some very nice gear too and very efficient judging by the signals they put out.

108 megs is getting its share of interest too, and reports coming in from all over the place of the signals being very good, with the usual v.h.f. gang being the first to hear "Explorer" and pass the information on to moon watch.

Conditions on 6 mx have been remarkable and no one with a tx on that band could miss out on real DX this time. The break through to JA was shared by many with Col 5RO really topping the score with 12 contacts on Feb. 2, others in the race were Keith 5MT, Reg 5QR, Ron 5MK and yours truly. Very good whilst it lasted with JA sigs up to 5 x 8 at my QTH, although one was heard coming back to Col giving him 6 x 9.

The opening of the break was an experience in itself in that VK2s were coming through very well, and suddenly they were replaced by JAs, just like that, and held for over two hours with some variations within that time.

KH6UL was heard here, not real good copy, but enough to identify, together with two Ws right down in the noise, but heard nevertheless, unfortunately no tx at that stage but fixed since. For the benefit of those who may have missed the news, VK0KT is on 50 Mc. Saturdays and Sundays from 1000 to 1100 GMT for 30 mins. on 20 mins. listening, and ZS2PE on 50.33 Mc with 100w. into 6 over 6 over 6 from 1100-2000 GMT daily and from 0700-2000 GMT Sundays, so watch out for these two, the latter may come up to what was heard in VK5 from ZS2FW on Jan. 30 at 2130 CST.

Les 5AX has re-built his driver stages and now has plenty of drive (and audio) and has re-entered the field in great style; he claims that if he was a heathen he too would have shared the fun on that Sunday night. John 5ZBA has solved his feed line problems and has the whole show sorted out nicely. Bob 5RI still trying to make it south on 6 or 2 mx, turn your beams that way chaps and give him a start. Hughie 5BC still heard here at good strength and giving good reports of 108 Mc. sigs: Oh for his QTH.

Col 5CJ still active on 2 mx and from his QTH the band has been wide open to VK5 and VK3, one of the latter at Westernport Bay using 10w., being worked. The Gambier boys thought Erg 5KU was converted to 2 mx but not yet. Keep working on him, Col. Tom 5TW has a new 522 so there will be some sigs from there soon. Leo 5ZAG sat for his morse recently—good luck Leo, hope you made it—and has made many VK3 contacts recently. Claude 5CH still active on 2 mx and reports visits recently from 5XN and 3ZE who did over most of the South East boys.

WESTERN AUSTRALIA

The 31st meeting of the V.h.f. Group was held on Monday, 27th Jan. A number of visitors were welcomed including John 5ZAN who has been in the East for some time. After business, which included election of officers for the year, had been dealt with, we were given a lecture on audio oscillators by Dennis 6AW; this included the many phases of audio and circuits and concluded with a demonstration of an audio oscillator built by Dennis on a c.r.o. and also compared with factory-type instrument, needless to say 6AW's had the edge on the commercial job.

50 Mc. DX during the Ross Hull Contest left much to be desired as far as W.A. is concerned. Contacts being few and far between—rather a disappointment to newcomers to the band. Noel 6ZBG and Arthur 6ZBE have hit 50 Mc. and have also been on 56 Mc.

Rolo 6BO and Don 6ZAV worked Wally 6WG in a three-way on 144 Mc. with 5/9 sigs on Saturday morning, 1st Feb. Wally then changed to 50 Mc. for a check, which also finished up in a three-way, but sigs were not as good as on 144 Mc.

A Field Day was held on Sunday afternoon, Feb. 2 on 144 Mc., and the following stations participated. 6BO, 6HK, 6SJ, 6ZAS, 6ZAX, and 6ZAV.

FEDERAL

Fed. President: W. T. S. Mitchell, VK3UM.

Fed. Secretary: L. D. Bowie, VK3DU, Box 2611W, G.P.O., Melbourne, C.1, Vic.

Federal Councillors:
New South Wales—Bob Godsall, VK2ARG.
Victoria—Dave Wardlaw, VK3ADW
Queensland—Arthur Walz, VK4AW.
South Australia—Rex Richards, VK5DO.
Western Australia—Ron Hugo, VK6KW.
Tasmania—Doug. Fisher, VK7AB.
Papua-New Guinea—Russ Coleston, VK9XK.

Fed. Contest Committee: Reg. Harris, VK5RR, Secretary, Box 1234K, G.P.O., Adelaide, S.A.

QSL Bureau: R. E. Jones, VK3RJ, 33 Landale Street, Box Hill, E.11, Vic.

Awards Manager: A. G. Weynton, VK3XU, 5 York Street, Bonbeach, Vic.

NEW SOUTH WALES

President: Perc. Healy, VK2APQ.

Secretary: Keith Woodward, VK2ZAU, Box 1734, G.P.O., Sydney.

Meeting Night: Fourth Friday of each month at Science House, Gloucester Street, Sydney.

QSL Bureau: Box 1734, G.P.O., Sydney. Frank Hine, VK2QL, Manager; assisted by Allan Smith, VK2AIR.

Zone Correspondents: North Coast and Tablelands: Noel Hanson, VK2AHH, Ryan Ave., West Kempsey, Newcastle: Les Sparke, VK2AOR, 18 Kahibah Rd., Highfields, via Adamstown, Coalfields and Lakes: H. Hawkins, VK2YL, 9 Comfort Av., Cessnock, Western: W. Stitt, VK2WH, "Cambijowa," Forbes, South Coast & Southern: E. Fisher, VK2DY, 2 Oxlade St., Warrawong; Sth. Western: J. W. S. Edge, VK2AJO, Wallace St., Coolamon; Tamworth: F. W. Fowler, VK2APF, 4 Thompson Cres., Tamworth.

VICTORIA

President: F. G. Ball, VK3YS.

Secretary: J. R. Lancaster, VK3JL.

NOTES

Administrative Secretary: Mrs. May, C.O.R. House, 191 Queen St., Melbourne.

Meeting Night: First Wednesday of each month at the Radio School, Royal Melbourne Technical College.

Divisional Sub-Editor: V. M. Jones, VK3YE, 7 New St., Surrey Hills, E.10.

QSL Bureau: Inwards and Outwards—W.I.A., 191 Queen St., Melbourne, C.1, Vic.

Zone Correspondents: Western: W. J. Kinsella, VK3AKW, Magdala, Lubeck; South Western: W. Wines, 48 Cranley St., Warrnambool, and W. Zimmer, VK3AWZ, 70 Skene St., Newtown; Far North Western: M. Folie, VK3OZ, 101 Lemon Ave., Mildura, Midlands: R. Jonasson, VK3ND, Farnsworth St., Castlemaine; North Eastern: L. Ellisson, VK3ALE, 72 Orr St., Shepparton; Eastern: J. Spark, VK3AJK, 20 Marshall Ave., Moe.

QUEENSLAND

President: Frank Bond, VK4ZM.

Secretary: W. J. Rafter, VK4PR, Box 634J, G.P.O., Brisbane.

Meeting Night: Fourth Friday in each month at the State Service Union Rooms, Elizabeth Street, Brisbane.

Divisional Sub-Editor: A. Simpson, VK4ZAE, Cr Baden Powell and White Sts., Everton Park.

QSL Bureau: Inwards—J. Files, VK4JF, Vanda St., Buranda, Outwards—Miss Clair O'Brien, 93 Jardine St., Stafford.

Zone Correspondents: Maryborough: R. J. Glassop, VK4BG, 80 North St., Maryborough, Townsville: R. E. Wilson, VK4RW, Hogan St., Stuart, Townsville.

SOUTH AUSTRALIA

President: W. J. Bulling, VK5KX.

Secretary: B. W. Austin, VK5CA, Box 1234K, G.P.O., Adelaide. Telephone UX 2621

Meeting Night: Second Tuesday of each month at 17 Waymouth St., Adelaide.

Divisional Sub-Editor: E. C. Daw, VK5EF, P.O. Box 44, Gawler, S.A.

QSL Bureau: G. Luxton, VK5RX, 27 Belair Rd., West Mitcham, S.A. (Inwards & Outwards).

WESTERN AUSTRALIA

President: J. E. Rumble, VK6RU.

Secretary: J. R. Elms, VK6BE, Box N1002, G.P.O., Perth, W.A.

Meeting Night: Third Wednesday of month at Perth Tech. College Annexe, Mounts Bay Rd.

Divisional Sub-Editor: E. J. R. Cowles, VK6EJ, P.O. Box 11, Bencubbin, W.A.

QSL Bureau: Jim Rumble, VK6RU, Box F319, G.P.O., Perth, W.A. (Inwards and Outwards).

TASMANIA

President: F. J. Evans, VK7FJ.

Secretary: M. Hurburgh, VK7MH, Box 271B, G.P.O., Hobart.

Meeting Night: First Wednesday of each month at W.I.A. Clubroom, 147 Liverpool St., Hobart.

Divisional Sub-Editor: W. W. Watson, VK7YY, 58 Brooker Ave., Moonah.

QSL Bureau: K. A. Johnston, VK7RX, 34 Tower Rd., Newtown.

Zone Correspondents: Northern: K. J. Briggs, VK7LX, 18 Melbourne St., Launceston; North Western: L. S. Eddington, VK7LS, 3 Jenner St., Wynyard.

PAPUA—NEW GUINEA

President: F. N. Nolan, VK9FN

Secretary: N. T. Casey, VK9NT, Box 204, Port Moresby.

Divisional Sub-Editor: R. Clark, P.O. Box 204, Port Moresby.

QSL Bureau: R. Lloyd, VK9ZAL, Box 204, Port Moresby.

FEDERAL

CHANGE OF FEDERAL SECRETARY

Federal Executive is pleased to announce that for the next six months, Mr. Bob Boase, VK3NT, will be taking over the duties of Federal Secretary of the Institute.

This change is necessitated by the fact that the present Federal Secretary, Doug Bowie, VK3DU, and his XYL are making a world tour in the near future.

Bob is active on both 40 and 80 metres and can often be heard during the week-ends.

For those wishing to contact Bob, his phone number is FJ 3821 during business hours and FJ 3952 at other times. As usual all mail should be sent to the postal box—No. 2611W, G.P.O., Melbourne.

VK5 FEDERAL COUNCILLOR

Word has been received by Federal Executive that the Federal Councillor for 1958 will be Mr. Rex Richards, VK5DO. Rex will be taking over from Mr. Gordon Bowen, VK5XU.

All members will support Executive in saying thanks to Gordon for his fine work during the past years. Through his fine efforts in the Division and by means of the broadcasts over VK5WI, Gordon has been able to maintain contact with members' thoughts and translate them into action. Besides this his wise councils at the last Convention will be well remembered.

However, VK5 are extremely fortunate to have another very able member to follow in Gordon's footsteps. Rex has had experience at Conventions and then as Manager of the Federal Contest Committee, he has been able to gain an insight into the Federal sphere.

Executive is happy to say a very big "thank you" and an equally big "welcome".

VISIT OF VK9 FEDERAL COUNCILLOR

A welcome visitor in Melbourne during the last couple of months was the VK9 Federal Councillor, Russ Coleston, VK9XK.

During his visit, Russ was able to have a number of discussions with Federal Executive. As a result various aspects of problems confronting the Institute have been given consideration.

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FEDERAL QSL BUREAU

Please note that the complete address of the Greek QSL Bureau and which should figure on all correspondence addressed to SV Amateurs is: QSL Manager George N. Zarifis, Box 564, Athens, Greece.

A new award from Japan styled "The DC-25 Award" and sponsored by the Japan Double Call Club is unique and interesting. The certificate may be claimed by any licensed Amateur who submits proof of having worked 25 double or triple call sign stations. Example: JA1ZZ, G5CC, VK4SS, W7BBB and so on. Contacts must have been made AFTER JULY 30, 1952, and the submission must contain at least five or more JA stations on either phone or c.w. Send QSLs with a check list and 10 I.R.C. to Double Call Club, JA1CC, Akira Asano, 257 Elfuku, Suginami, Tokyo, Japan. The QSLs after checking will be returned by registered mail together with the award. The award is also available to s.w.l's.

The correct address for the India QSL Bureau is Box 534, New Delhi, India. The old Munnar address must not be used.

Once again the well known Helvetia 22 Contest is coming up. The U.S.K.A. has scheduled it for the following dates: 1500 GMT May 17 to 1700 GMT May 18. The object of the contest is for stations outside HB to work as many stations in each of the 22 Swiss Cantons as possible. All Amateur bands may be used for c.w.-c.w. or voice-voice contacts, and the usual serial exchange is to be made. Three points are earned for a contact with any Swiss station on each band. The total points earned on all bands are multiplied by the sum of all Cantons worked on c.w., phone, or both together on all bands, hence the maximum multiplier possible per band is 44 (22 c.w., 22 phone). Entries must be submitted on separate sheets for each band and contain the usual contest declaration. Certificates to the two highest scoring entrants in each country. Last date for mailing logs is June 7 to U.S.K.A., HB9NL, QSL Manager, Knutwil, LU, Switzerland. The information does not state how the separate Cantons are distinguished and the result sheet of the 1957 Contest does not list a single VK entrant.

Following on the announcement in February "A.R.", it is advised that Doug VK0LJ is now operating from Mawson. The rest of the boys will probably be in action shortly.

—Ray Jones, VK3RJ, Manager.

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CONTEST CALENDAR

Compiled by W.I.A. Fed. Contest Com.

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A.R.R.L. DX COMPETITION—

Dates: Phone—March 7 to 9; C.w.—March 21 to 23.

Times: 2400 hours (7th, 21st) to 2400 hours (9th, 23rd).

Cypher: RST followed by power input e.g. RST 589075 for c.w., 57100 for phone.

Scoring: "QST", January, 1958.

REMEMB. DAY CONTEST—

Dates: Saturday, 16th August, 1800 hrs. E.A.S.T.: Saturday, 17th August, 1759 hrs., E.A.S.T.

Rules: See amendments, February issue.

Voting return date: 31st March, 1958.

FEDERAL AWARDS

W.A.V.K.C.A.

VE3VK, W6ABA and G6KS have been issued with W.A.V.K.C.A. Certificates. The total number of certificates issued to date is 71 only.

—Gordon Weynton, VK3XU, Manager.

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NEW SOUTH WALES

On Friday, 24th January, members who attended the monthly meeting of the N.S.W. Division had a very interesting evening. A lecture by Mr Ern Stevenson and discussion with Mr Max Hull VK3ZS, our Federal Vice-President, was the order of the evening.

Mr. Stevenson lectured on transistors and various applications in which they could be used. By the use of slides the various methods of using transistors were described and comparisons made with similar circuits using conventional type valves. Several types of transistors which are not yet available in Australia were also described. At the conclusion of the lecture many questions were asked by members and Mr Stevenson very capably answered. A hearty vote of thanks was moved by Bill 2XT, who came down from Newcastle to attend the Convention at Dural.

The Chairman introduced Mr. Max Hull, VK3ZS, to members. Max then spoke on various phases of Federal Executive's work in Institute affairs. Many points on the magazine "Amateur Radio" were discussed and several suggestions made by members were noted by Max who assured them that he would refer them to the Magazine Committee on his return.

Federation of the Institute was also mentioned but although it was agreed that many problems would have to be solved, it should receive due consideration as it was conceivable that many advantages would be gained.

The necessity for the Amateur of Australia to be represented at the International Telecommunication Union Conference at Geneva

in 1959 was discussed at length. Proposals for raising the necessary finance to meet the expenses of a representative were put forward, and the opinion was expressed that every licenced Amateur in Australia should be asked to contribute £1 towards the expense. This, providing that every Amateur contributed, would establish a £3,000 fund.

The tasks that such a representative would be required to undertake were outlined and the problems that would arise if adequate preparations were not made were also mentioned. Many questions on Institute activities were asked by members present and these were ably answered by Max.

As it was some considerable time since a member of Federal Executive had been present at a Divisional meeting, many points were discussed and clarified to the satisfaction of many present.

During the business portion of the meeting, the Chairman welcomed the following visitors: 2WH, 2AJS, 2ACK, 2AJK, 2ZJF, 4EV, 2AGG, 1ZCA, 2AIA, 2AAH and 2AYE (who we had not seen at meetings for some time). Several of whom had come to Sydney to attend the Convention the next day.

The following new members were also admitted to the Institute: D. Whitelaw, 2ZCE, A. H. Outtrim, 2EX; J. F Graydon, 2AIS; J. P. Day, Assoc.; K. Edmendson, Assoc.; R. J. Jackson, Assoc., H. E. Jones, Assoc.; J Brier, Assoc; E. Kruger, Assoc.; G. W Main, Assoc, F Smith, Assoc., J. Snell, Assoc.

The motion from the VK6 Division dealing with the proposed request for the increase in power was discussed at some length and the meeting carried a motion that the Division support the VK6 motion.

W.I.C.E.N.—Bob 2ARG reported that appointment of the five Area Control Officers had been made and that he was now awaiting replies from these members accepting the positions.

EIGHTH ANNUAL CONVENTION

The Convention was held at VK2WI, Quarry Road, Dural, for the first time. The attendance was beyond all expectations, the members who signed the visitor's book exceeded 200. This number included 139 licenced members who had recorded their call signs. The weather was excellent and although two large tents were erected in the grounds, the seating accommodation was not sufficient for the number present.

Proceedings commenced at 3 p.m. with the Divisional President, Perce Healy, 1APQ, introducing the Federal Vice-President and members of the N.S.W Divisional Council. After welcoming those present to 2WI, many of whom had not previously visited Dural, and giving a short review on recent activities at Dural, the President introduced Reg Brook, Secretary of the Central Coast Section who acted as Master of Ceremonies. The first event was a display of member-built equipment and a short description by the member displaying the equipment. Pieces were shown by 2AET, 2ANF, 2ARZ, 2APQ, 2ARG, 2ZDL, 2CB, and 2MP, which were later judged by 2HZ, 2JU and 2VN.

This was followed by a number of lecturettes given by the following: 2CB, 2AOU, 2OT and 2AJA. The best lecturette was selected by ballot of those present.

At this stage refreshments were served, then followed a sale of disposal gear, when many pieces of useful equipment from Type 1155 Receivers to Box Kites and Balloons in Gibson Girl Packs.

A very excellent buffet tea was prepared by a ladies' guild from Dural, who attended to the catering for the Convention. Large tables tastefully decorated contained many tasty and appetising dishes to tempt appetites of those present.

After tea, technical questions were answered by Max 2OT, who, as well as giving answers to questions, referred questions to members for answers.

This was followed by a film session which lasted for an hour and which was interrupted by the arrival of "Sputnik No. 2" which passed directly overhead, giving many their first view of the satellite. The open air setting for the films in the evening was perfect.

After the films a further disposal auction was held, followed by supper, then to close proceedings the Divisional President called on the Federal Vice-President to present the prizes to the winners of the various sections, then thanked all who attended for making the day such a success and those who assisted in organising the day's proceedings. After which Bill 2XT, on behalf of those present congratulated Council on their efforts, both in regard to the Convention and their work during the past months.

Several additions to VK2WI brought comments of appreciation from those who had not visited Dural for some time and found a 25 ft. x 13 ft. 6 in. iron frame building had been erected to house the 25kva. emergency power plant as well as other Institute equipment.

The telephone installed, Dural 289 is the number of the Institute's transmitting station VK2WI.

But that which caught the eye was the new look to the transmitting section which had the walls draped from ceiling to the floor and the floor covered with a carpet type covering which now gives this section the look and accoustic properties of a broadcasting studio. Our thanks go to Mrs. Duff for her work in making up the drapes.

The following are the call signs of those who recorded them at the Convention. There may have been others who did not record their call signs against their names.

VK's 2APQ, 2ALJ, 2ARG, 2OT, 2EO, 2CD, 2ZAU, 2CB, 3ZS, 2DO, 2ZDM, 2ZJC, 2AHX, 2OI, 2FY, 2EW, 2AGF, 2AIZ, 2AJS, 2PM, 2ER, 3DR, 2BD, 2XT, 2FP, 2ZL, 2BQ, 2YM, 2EI, 2XX, 2HL, 2ZDE, 2UO, 2RJ, 2ZDL, 2QL, 2ZAF, 2AAJ 2AUM, 2OW 2JU, 2ARR, 2ZBX, 2ZCW, 2PF, 2AJA, 2RU, 2ZAL, 2ND, 2TQ, 2AIS, 2ZAC, 2ZMN, 2VN, 2IK, 2AJW, 2TP, 2ZCF, 2IC, 2ADF, 2XZ, 2AUA, 2HU, 2AWZ, 2EL, 2QZ, 2AVJ, 2AWW, 2AVQ, 2HZ, 2BP, 2MZ, 2EX, 3OA, 2MP, 3OZ, 2AKV, 2ANF, 2AET, 2JW, 2VY, 2AYE, 2WJ, 2AOQ, 2AVW, 2ACP, 2AGH, 2AVK, 2AOU, 2ARZ, 2ART, 2ATO, 2AZO, 2QX, 2ZF 2AAP, 2ABU, 2AJZ, 2ZDC, 2ARE, 2ATB, 2ZAB, 2VL, 2AJQ, 2AT, 2ASZ, 2YB, 2AVT, 2ABT, 2FJ, 2AB2, 2WH, 2BG, 2QS, 3OA, 2AWQ, 2AAB, 2BZ, 2AEZ, 2AB, 2NK, 2ACO, 2IH, 2ASW, 2ABE, 2BM, 1ZCA, 2YR, 2AGY.

The prize winners were as follows Member-Built Equipment- City—Max 2ARZ, panadaptor; Country Max 2MP, transmitter Lecturette: Hans 2AOU Visitor who came the greatest distance, John 2ZDM. Lucky Lapel Shield, J. P Folkard, 2ZAF

Members are reminded that the Annual General Meeting of the N.S.W. Division will be held at Science House, Gloucester St., Sydney, on Friday night 28th at 8 p.m.

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VICTORIA

As previously announced the first general meeting for the year held on 5th February took the form of a discussion night, or more generally speaking, a grouch night, and safety valves were popping all over the place.

First and foremost our Federal Secretary pointed out that the time is fast approaching when the Institute must reach a decision on the sending of a representative to the next I.T.U meeting to be held in Geneva in 1959. This matter has been lurking in the background now for months, in fact years, and we seem to be still no nearer a conclusion than ever. If we decide not to send a representative then we must rely on a proxy to put our case and this has proved to be a very unsatisfactory arrangement in the past, as evidenced by our unfavorable frequency allocations, etc., when compared with other countries who had representations. On the other hand, there is no guarantee that sending a delegate will automatically bring success to our case but the chances of success should be considerably enhanced. This must be so as, although our deputy would not have a vote, this being vested only in the Government representative, he would be "Johnny on the Spot." He would thus be excellently placed to state our case on committees and in lobbying activities generally, and ensure, as far as is humanly possible, that the policy as formulated here in Australia is not distorted or misunderstood. In other words, he would keep our case alive and generally act as our mouthpiece on all matters pertaining to our area.

Unfortunately the expenses of such a delegate must be found by the Institute and would amount to something of the order of £1,500. When we think of our other commitments and our present financial position, this is a very large sum of money and would be very difficult to raise, particularly as nothing has yet been done. It was suggested that perhaps a levy of £1 a head would be the most satisfactory method of raising the money but this would need to be agreed to by a large majority of the members and, as it was pointed out, this would probably be no mean task. Most of the members present at the meeting were in favor of sending a delegate and raising the required amount by means of a levy, but it was decided that the meeting was not a representative gathering of the members generally. The £1 per head would be little enough to pay for the use of our bands provided there was a reasonable chance of success, but there is no guarantee that this would be so. However, this uncertainty applies to most things in life and nothing is achieved without some sort of risk.

Our Federal Secretary is leaving on a world wide tour just before Easter and he intends to make contact with other Amateur Radio organisations during his trip. It would be a decided advantage, therefore, if we could reach a decision in this matter prior to his departure as, if the decision is in the affirmative, he can do some very valuable ground work during his travels and maybe get some financial backing from other organisations in Region 3.

As a consequence it was decided to refer the matter to Council with a recommendation that members be circularised, preferably in conjunction with the forthcoming statements of account, with a view to reaching an early decision.

Ken 3AFJ produced the next item for discussion—our hardy annual—the lack of workers. His remarks were concerned particularly with the present strength of the Magazine Committee.

As you know this Committee is responsible for producing the monthly magazine principally, but in addition handles the call book, the log book and sundry other odds and sods which all adds up to the expenditure of a lot of time by the bods concerned. Up to the time of the meeting this Committee has been functioning with four members short and the extra work on those remaining has been no joke. Thanks to Ken, the following four members volunteered to fill the breach: Syd 3ASC, George 3AOM, Jacques 3ZEE and Bill 3AHN. Thanks chaps.

At this stage President Fred gave a brief resume of the benefits which result from taking office and the necessity which exists for those who can to lend a hand. In this connection he pointed out that he has been nearly twelve months trying to obtain a volunteer to write the script for the Sunday morning broadcast. During this time, Mrs. May has been carrying on and now that she is on leave Allan Elliott has been filling the gap. Quite a lot of discussion took place on ways and means of producing these notes, but much has still to be done. Keith 3YQ has undertaken to lend a hand for the next six months.

Don't get the impression that the Institute is fast running down because this is far from the truth. There is still a solid core of willing toilers who battle on unheralded and unsung, but their load could be considerably eased if others would appreciate their work and offer to share the burden.

SUBSCRIPTIONS

● Please pay your Subscriptions PROMPTLY when due. Failure to do so may result in the loss of valuable issues of "Amateur Radio." High costs of production make it necessary to limit the number of extra copies printed each month.

VK3 EASTERN ZONE

CONVENTION

to be held at

SALE

on

SATURDAY and SUNDAY, 15th and 16th MARCH, '58

★

For all bookings and enquiries contact:

David Scott, VK3DY

The V.h.f. Group advises that it proposes to hold a convention on 9th March and it hopes to include a visit to the ABV Tx on Mt. Dandenong. Listen for further announcements.

The lecture for the meeting on 5th March will be given by a member of the staff of D.C.A. There will be no lecture at the April meeting as this is the annual general meeting, but it is hoped to tee-up a lecture on some aspect of t.v. by a member of the staff of the Royal Melbourne Technical College for the May meeting. Ideas on lecture subjects would be welcomed by the President.

New members admitted at the meeting were: Full Members—K. C. Oldroyd (3ZED), A. Parker (3AER), R. H. Hall (3ZEC), M. R. Osborne (3ZCZ); Associate Members—J. Forse, R. E. Buchanan, L. E. Fowler, W. H. Hensen; Country Junior Member—G. K. Glover.

EASTERN ZONE

Don't forget our Convention to be held at Sale, 15th and 16th March, so finalise your arrangements now.

The dinner will be held at the Masonic Hall, and on the Sunday there will be an inspection of the Plastic Factory and 3GI. There will also be a picnic lunch at Sea Spray (weather permitting) and hidden tx hunts, etc., during the afternoon.

David 3DY went portable down at Point Lonsdale on 80 mx at the end of February.

SOUTH WEST ZONE

The zone is very active in most ways for the Convention, which is to be held in Warrnambool on 22nd and 23rd. If you intend coming please send a deposit of £1 for bed to reach the organiser, Bill Wines, 48 Crawley St., Warrnambool, before 9th March. You must also book if you intend coming for the dinner which is a 3 course poultry meal with refreshments. Your booking should reach the organiser by the 9th with a 10/- deposit.

There will be a prize for the chap who travels the longest distance. In addition there will be 144 Mc. activity and a fox hunt and tx hunt on 3.5 Mc.

The hook-ups have been well attended of late, even Peter 3APJ from Kyneton being present. Not much has been heard of late of 3HG, 3APS or 3JA. What's the matter chaps, are you only able to find the switch for the green-eyed monster? 3AWQ hopes to be on 144 Mc. and 6 mx on the Saturday of the Convention to work the mobiles on these bands. He would also like a few beams turned his way occasionally. The 3.5 and 7 Mc. mobiles will be able to have a contact as 3PS will be on the job from about 12 o'clock on the Saturday and perhaps 3ARJ. On arrival you are all to report to the organiser's QTH for instructions of booking and a cup of tea.

Trev. 3ATR and XYL and harmonics have been on holidays in the fair city of Warrnambool and I believe 3ANQ and he had a great rag chew on 144 Mc. equipment. We hope to see you down for the Convention.

The Ballarat boys never seem to come in on the hook-ups. What about it Don 3PO and Bob 3GR, and anyone else from that area? We also hope to see you boys down in Warrnambool for the Convention. Kevin 3AKR made himself known the other week.

Geelong Amateur Radio Club

Geelong members are looking forward to the next Zone Convention to be held at Warrnambool on 22nd and 23rd March. Mr. C. Rann, 3AAK, while holidaying in Geelong, called at the club and we were pleased to hear a talk on the subject of Amateur T.v.

VK3 SOUTH WEST ZONE

CONVENTION

to be held at

WARRNAMBOOL

on

SATURDAY and SUNDAY,

22nd and 23rd MARCH, '58

★

For all bookings and enquiries contact Organiser:

Bill Wines, 48 Crawley Street, Warrnambool

before the 9th March.

The details of the flying spot scanner were discussed and the necessary techniques involved. Some members of the club are advancing with Amateur t.v. transmission and wish to contact Melbourne experimenters. Would any Hams in Melbourne interested in Amateur T.v. please contact Bill 3BU.

V.h.f. operators in the S.W. Zone please note. A meeting will be held at 1300 hours on 9th March, 1958, at the clubrooms, 191 Queen Street, for the purpose of discussing scoring for the Ross Hull Contest—the outcome to be submitted in the form of a recommendation to Council. A picnic at some suitable rendezvous has been suggested after this meeting.

Bob 3IC entertained members at a recent visit with a discussion on the BC221 frequency meter. Recent disposal sales have been very successful and some fine pieces of equipment have changed hands. Syllabus items for March are "Colour T.v. in America" and a visit to the shack of 3AWZ for v.h.f. operation.

MOORABBIN & DISTRICT RADIO CLUB

The New Year has got off to a flying start at Moorabbin, and it is hoped that this year will bring considerable progress in club activities. The general meeting in January consisted of a discussion night, in which members considered ways of introducing new activities during the year. First and foremost, our aim is to make the club call sign 3APC heard more frequently on the air. With this in view, the meeting resolved that a hook-up night be held on 40 mx on the fourth Friday of each month.

It was with regret that the meeting received the resignation of our Treasurer, Ken 3ACS, who is shortly leaving us to go overseas on official business. Ken hopes to be active with a G call sign, and we hope to hear him from this end. Meanwhile, we take this opportunity to wish Ken and his family a very enjoyable trip and hope they get the most from their stay on the other side. The meeting elected Jack 3ZEF to act as Treasurer.

The first hook-up night was held on the fourth Friday night in January. At 2000 hours the club station, operated portable from the house of Laurie 3CN, called member stations, and was promptly answered by the President, Stan 3ZE, with the Vice-President, Jack 3ZEF, visiting. Altogether ten stations participated, including one Honorary Member, Keith 5ZY, and other guest stations. The evening was voted a great success, and we invite members and friends to join us next month at the same time.

Another activity in the near future is to be the airing of 3APC on 2 mx, from the club natter night on the first Friday of each month. Plug-in equipment is being built by Jack 3ZEF and v.h.f. enthusiasts are requested to watch out for us. We hope to be on 2 mx the first Friday night in March, and each month thereafter.

A programme of technical lectures and visits is being arranged for the year. Don't forget to be with us the first and third Fridays of each month at the Library, Moorabbin Town Hall.

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QUEENSLAND

During the month of January the boys have had a considerable number of things to consider. Present indications are that 1958 is off to a good start and let's hope that our Division will grow in strength and prosper accordingly.

Vince 4VJ called to mind the enjoyable times that the boys had at our last Convention. His suggestion that we hold a local barbecue was immediately taken to heart at the last general meeting. Arrangements have been made for a get-together barbecue at Cash's Crossing on March 1. All interested Hams, friends (and relatives) are requested to be at the Chermside Terminus by 2 p.m. Two mx tx hunts are to be conducted and heats run off. So come along and get in some practice for our next Annual Palm Beach Convention. Don't forget to bring along your radio gear, XYLs and harmonics, etc.! Anyway, a good time is assured for all at a very nice picnic location.

Council wishes to remind all members that the next general meeting will be an Annual General Meeting, which brings with it nominations for positions on Council. At Townsville, there was a re-election of officers and I believe that there were no new faces present on the new council. Let's hope that Brisbane with its greater population of Hams can give some of the present councillors a well-earned rest. There are some present councillors who have served continuously for more years than they care to remember. Our Secretary, Jim 4PR, signified that he is willing to continue as Divisional Secretary for a further year and believe me, we are all very grateful as the position is one which requires a great deal of personal effort and sacrifice. As "Nino" would now be able to say, "You doin' fine mate!"

The problem of securing a new typewriter has been temporarily solved. Mrs. 4PR has graciously consented to type all our "QTC" stencils, which on a new machine will make for easy reading. We have received suggestions about purchasing a reasonable second-hand machine, but in order to conserve our finances, Council only too willingly accepted Mrs. 4PR's kind offer. Members now consider that the old Divisional typewriter, which Mrs. 4JO pounded with remarkable success, should now be used as a "boat anchor!"

At the end of February, all membership fees will be due. The cost of production of "Amateur Radio" has risen 3/- per annum. Membership fees have remained the same, so, when you send your subscription in next week, and you subscribe to "A.R." please remember to add the additional 3/-. Council was notified by the Magazine Committee that production costs could not be met without an increase in price. Don't forget, at the end of February, you are unfinancial.

On the Saturday night, following the Annual General Meeting, will be the Annual Dinner which will more than likely be held again at Anzac House. All members who are able, are requested to attend. Friends from various Trade Houses and Government Departments will be invited and we hope to have an up to the minute lecture concerning the Geophysical Year by Professor Webster, or one of his colleagues. Again, we extend the opportunity for fellowship to any of the country boys who can join us at the Annual Dinner. Further details will be published in "QTC".

The minutes of the recent Federal Convention have duly been ratified and returned for further compilation. Also, we were once again requested to keep in mind the possibility of the Institute sending a representative to the Geneva Convention next year. The estimated cost of such a trip abroad would be in the vicinity of £1,500, and with the possibility of our losing more band space, each member should give this matter earnest consideration. Be prepared to make that little extra sacrifice, financially, to protect your hobby.

Bert 4AO has been doing extensive maintenance to the 80 mx tx and on his holidays too! Just how keen can you get? Nevertheless full credit goes to Bert for he really brought 4WI up to date. Council requests all Amateurs to make full use of their bands and keep them populated. Latest reports are that there is DX to be had on 21 Mc. and the boys have no trouble with signals to Japan on 80 Mc.

Righto boys! Start getting all that mobile gear ship-shape, as the Palm Beach Convention isn't far off. The Division hopes to secure the National Fitness Camp once again and fees, etc., will roughly correspond with those of previous years. The last Convention was a roaring success and this year we hope to make it even better. So what about it, if VK3 boys can come all the way from Sydney to someone else's Convention, surely we can do justice to our own.

Unfortunately, Stan 4SA was recently hospitalised with a bad arm. However, you can't keep Stan down for long and he is once again making his presence felt, as was recently demonstrated by the number of students who sat for the last A.O.C.P. examination. Glad to hear you're well enough to go back into harness, Stan.

The President advises that there is no new disposals to hand, but as there are a considerable number of Government surplus sales going through, anything may turn up. It is hoped to present for the interest of members at future general meetings a series of film shows and technical lectures.

Is your rig safe? Does it comply with the regulations? Have you a frequency meter and your licence handy? These are questions you may have to answer in the near future and the Radio Inspector would like to get the right answers! You may be next.

Concluding with the request to listen for the melodious tones of the American Satellite on 108 Mc., please do not confuse these with the wedding bells that were heard recently by Jim 4OB, the Divisional Treasurer. To Jim and to Joyce, we wish all "the life that happiness can bring."

All Satellite reports are to be submitted to 4WI. See yer to-more-er Explorer!

MARYBOROUGH

4CB is operating on 10 mx only, while not watching for t.v. break-throughs. He now has a 70 ft. collapsible guyed mast. 4DJ is staying up late for 15 mx DX, and getting some new countries. He is also working DX on 10 mx and putting up a 7 Mc. ground-plane. Grahame made a portable rig for the

National Field Day, set up at Ghost Hill, Pialba, and made some good contacts. He has also built a pre-selector which has brought up DX signals two S points. 4BG now has a 10 mx converter going, and is enjoying DX on that band. In addition he is re-building grid dipper for extra bandspread in order to adjust four element tri-band beam. Congrats to Noel Bignell, still at school, on getting his limited license. Get started on that c.w. Noel, so that we can hear you on the d.c. bands.

TOWNSVILLE

The Annual and General Meeting was held at the residence of 4BX and quite a large number turned up, 16 in fact. Although quite a few of the old timers were amongst the absent, nevertheless it was heartening to see a few new members roll along for nomination to the club.

The retiring officials were again duly re-elected and the Chairman and Secretary vowing that this is their last term in office and some of the younger ones had better get ready to step into their shoes. Pat 4ZBO informed the club that the R.A.A.F. club was starting classes and issued an invitation to associate members to come along. Morse would also be taught and five members signified their willingness to attend for morse and tuition in Radio. Many thanks Pat.

The Secretary 4WH presented the balance sheet and all were relieved to find we were not in the red. Joe 4JH promises to give his long-awaited lecture in March—nailed him down at last. My apologies to Harry 4ZP at Sarina for not meeting him in Mackay as promised. Truth is the wife would not face that horror stretch beyond Bowen.

Eric 4EL and Len 4SD chasing the Europeans on 10 mx each evening, closely watched by Ted 4EJ and John 4DD, John going on holidays to Sydney and on the look out for parts for the gang. Bits and pieces hard to come by up here. Ted is unable to rotate the beam due to birds building and hatching their eggs. Vern 4LK had a few hurried visits in course of business and now building mobile gear (all bands) for the car. Shortly shifts to new QTH away from QRM. Bob 4NG watch out now. Bob 4TK also sends along news.

A Christmas morning hook-up on 7 Mc. had Basil 4ZW, Harry 4ZP, Vic 4BJ, Bob 4TK, Vern 4LK, Alex 4MA, Frank 4FC, Claude 4UX and Frank 9FN. Andy 4BW was missing due to holidays. Andy spent two weeks at Port Douglas where he listened each day on sked times. Also spent some time at Atherton as guest of Harry 4HK. Another large hook-up was held on New Year's Day. Alex at Mt. Garnett spent part of his holidays in Cairns where he operated portable and also assisted Basil 4ZW in re-arranging his new rig. Basil crushed his little finger while doing chores around the house. Bob 4RW called on a few of the Hams in the far north whilst on holiday and operated from some of them. Gordon 4GH of Maryborough was also a visitor to the north and called on several of the gang en route.

Harry 4HK and Bert 4BP have joined the morning or afternoon hook-up on 40 mx at times. Likewise John 4DK, while Don 4PW has been heard since his return from Rocky on leave. Listener Agton at Atherton has erected a smart efficient and rotatable beam for 50 Mc. and has new converter for his rx also. Why not try for a Z call sign Agton? Bob 4TK at last finished his all-band rig which has a multiband coupler. Tom 4TT and Andy 4BW in a 3-way with Eddie 5OW at Darwin on 14 Mc. most evenings. Norm 9NT getting settled in at Rabaul and expects his cases of junk to arrive from Mareeba at any time. Vic 4BJ at Beautiful Bundy off on holidays and developed a passion for Nth. Qld. mangoes. While Harry 4ZP does the same for watermelons during the hot dry spell. QSOs between Harry and Andy approaching the 1,500 mark. Ted 4MH (Cairns) comes on the air from time to time. Rumor has it that Ken 4XD giving up the game and has his gear up for sale. Want to see some surplus gear just sell on Bill 4XM. He has a house full, no kidding.

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SOUTH AUSTRALIA

There just cannot be many growls or complaints in our Division these days, because at the last get-together general business was at a minimum and took very little time to get through, so that within the hour of opening the meeting, President John was able to hand over to those two hard working types, Dougal 5BY and Norm, to conduct the "Tender" programme. This they did with great gusto and the amount of gear that changed hands was amazing, ranging as it did from morse keys (complete with dust—for shame) to complete units.

These nights are usually well attended and this one was no exception, in spite of that there was a fair carry over, some of which went by private treaty and went away in new hands.

Our membership is still growing, 7 new associates, and 2 new full members being added at the last meeting, there being a few conversions imminent too, when last exam. results are known, so Norm gets it both ways, or he gets you both ways, but in the main keeps the membership alive. Congrats to the new faces, hope you enjoy the fraternity of membership.

The January holiday saw the annual picnic function again, this time Tea Tree Gully being chosen, which turned out to be a really good choice, for it was apparent that all who attended really enjoyed themselves and agreed it was as good a picnic as we had ever had. Whether it was the compact nature of the facilities of the grounds, the weather, the programme, or the organisers, something or a combination of them made a very friendly and enjoyable atmosphere, that gave the proceedings a swing that must have delighted Norm, Frank 5MZ and Luke 5LL, all of whom really put a lot into the show. We missed Joe 5JO, but as he was unfortunately tied up at home could not make it—hope all well again now Joe.

Several of the items were perhaps illuminating in their way, for instance XYL of Treasurer Jim 5FO proved that she could throw a rolling pin further than anyone else (Jim can run and duck well), whilst my XYL, who came second in that event, caused me some alarm—I'm now taking running lessons, to hang with DX for the time.

They had us threading needles, running bare footed over three-corner jacks, putting other blokes' boots on and finally playing cricket and in the latter event that portly character no less than "Pansy" (Aga Khan) 5PS was a starter, but didn't tire himself at the crease, in fact it was considered his filters were wrong somewhere in that a fast one from John 5ZBA just went through like any vigorous harmonic would.

Phone once again cleaned the c.w. out, there being no need to quote scoring, that would be too painful, but phone did have an advantage in a couple of scorers who obviously do not confine their playing to W.I.A. picnic days.

Some hidden talents of a few of the younger members came to the fore and it was nice to see them in action. The final scores were c.w. all out for 38, with phone 8 for 116.

The tennis courts were not neglected, nor did the children miss out, "Uncle Frank Bentley" had a host of novel items and ideas, including an animate button hole skeleton that caused a riot and a good supply of minor prizes and plenty of ice-cream. The doll in the ice competition was won by the great grand-daughter of a dear old lady, who at 85 years of age, was present and enjoying the proceedings, the little girl being John Hazeldine's youngest.

An inspection of the car of Len 5OC disclosed a spade (or shovel—depends on your old school) and it was considered that to be the one he uses to dig them out of the QRM with, whereas in fact it is used to gather suitable garden soil. The trick being that if you pay him a visit at any time, the entry fee is a bag of dirt—reason?—he lives on a hillside where nature has denuded the rocks of suitable soil and XYL wants a garden.

By the way, it is possible that Len has the only set-up where the antenna leads go down through the floor of the shack to the flat top which happens as a result of said hillside.

Bob 5BG has another unique set-up, his ant. being close to a b.c. vertical and he has 1 amp. of r.f. at one frequency coming down the feeders and his own r.f. going up (quantity not quoted). What about beating something against the 1 amp. and poking side bands on it Bob—you might make history!!

The Gibber boys at 5WC are still on the ball. Pat GI3KIX recently joined the team with a couple of others who are c.w. types, so get your b.f.o's. on chaps and be in it. Ron 5FY building a new 5OW rig around a Geloso and he tells us it will have plate and screen modulation this time, good for him, better for us.

News from the South East tells that Col. 5CJ is still on 7 Mc., and a recent meeting of the gang at 'Gambier, took the form of a visit to the shack of 5CJ where a very enjoyable evening was had by all, especially the part played by Mrs. 5CJ in providing an excellent supper. The appetities of the chaps being the best proof of the quality. The tape recording dealing with noise limiters, etc., was well received by the chaps also, and their thanks to the Division in making the tapes available.

John 5JA still off the air, for shame, for it's the one-eyed monster that still occupies his time. Erg 5KU heard occasionally on 20 c.w. Stewart 5MS pokes out a signal on 20 now and again, his daughter recently returning from U.K. with personal news of some of Stewart's G contacts.

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TASMANIA

NORTH WESTERN ZONE

A record meeting was held at Burnie during February at the QTH of our President, Sid 7SF. Twenty-four members were present, no less. A lively discussion took place on the pro-forma circulated by the Noise Location Committee in Hobart and it was decided to make a 3-hour listening watch on Sunday, 9th February from 9 a.m. to 12 midday in an attempt to correlate noise on the N.W. coast.

A practical demonstration of the Hon. Secretary's new coil winder followed after the meeting, and Ted 7EJ performed his usual task as auctioneer.

The highlight of the evening was the supper provided by Sid's mother, ably assisted by his sister, Enid; Joy, XYL of Roy 7RN; Mrs. Bob Wilson and Miss Phyl Greaves. The usual comment applies and Sid should be able to live on sandwiches, sausage rolls and cream cakes for at least a fortnight. Congratulations all round.

Sid's t.v. set also created some interest, particularly when Ken 7AI knocked a wire off somewhere and we had sound but no picture.

Understand Ray Schulze, a Devonport associate, has purchased a No. 19 set. Study on Ray and you will be able to push the key to "Tx" before long. Associate John Lee is getting quite serious about this Ham business and has obtained a pair of poles with the aid of a couple of bullocks. Believe bullocks will also be used to erect same.

Allan Baptist is receiving t.v. sound and although Allan has no working tube, the beam on the roof tops has given him increased social standing, in fact the whole street appears to be proud of it.

Lee 7KC heard by Sec. Max calling his home State—VK8—recently on 40 mx, only trouble was found out later Lee was calling on 20 mx.

Had a trip down South recently, worked portable from Hobart and was heard by Myles 7MF on King Island. Thanks for report Myles. Visited Ken 7KA and found out why 7KA sounds like a kw. There is certainly some work there Ken, and what about going into commercial production for beams, or do I remember you saying "never again"!

Burnie associate Ken Brown seen at the local auction again; bought a telescope for 30/-. Any sightings of the Explorer yet Ken? Associate Terry Tongs also visiting auction. That AR8 was too dear anyway Terry.

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0.5/600	1/7
0.1/200	1/2
0.1/400	1/9
0.1/600	2/0
0.25/200	2/0
0.25/400	2/5
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0.5/400	3/11
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T6/52 200 mA./385v./2 x 6.3 5v.	114/5

Step-Down Ironcore Transformers

T3/14 230v./110v. 20 watt	55/0
T1/30 230v./110v. 40 watt	82/6
T1/60 230v./110v. 70 watt	98/11

RECORD PLAYERS AND RECORD CHANGERS

B.S.R. HF8 4-speed record player	£13/5/0
Collaro 3-speed record player,	£13
Dual model "295" 4-speed record player	£18/10/0
Collaro 4-speed record changer,	£22/1/6
B.S.R. 4-speed record changer,	£20/10/0
Philips 3-speed record changer,	£25/18/0
Dual 100 L/I automatic record changer, 4-speed	£31/8/0
Philips AG201 "Disc Jockey" in portable case	£21

PICK-UPS

Goldring L336 pick-up with variable reluctance cartridge.	
Acos GP10 Std. pick-up.	£3/12/5
Acos HGP40 pick-up with two heads	£9/15/0
Acos HGP50 pick-up turn-over head	£4/19/6
Acos HGP80 pick-up (Ceramic)	£6/16/0
Ibbott crystal pick-up, two heads	£14/10/0
Ronette crystal pick-up, 12 or 16 in. arm	£7/10/0
Garrard pick-up needle pressure gauge	£1/5/0

ROLA LOUDSPEAKERS

3C	£1/12/8	6-9L	£3/0/6
4C	£1/11/6	8H	£2/10/0
4P	£2/1/0	8K	£2/12/6
4-3C	£1/17/6	8M	£3/3/0
4-5P	£2/8/0	8-PA	£3/3/0
5C	£1/13/6	12K	£3/6/0
5CX	£1/18/0	12M	£4/1/0
5P	£2/2/6	12-O	£6/0/0
5PX	£2/3/6	12-O De Luxe	£6/10/0
5-7H	£2/6/0	12-OX	£11/4/0
5-7L	£3/3/6	12UX Hi-Fi, 15 ohm V.C.	£28/19/0
6H	£2/5/0		
6M	£2/18/6		
6-9H	£2/15/0		

SOLDERING IRONS

Scope "six seconds" soldering iron	50/0
Transformer for same for 230v. operation	49/7
Birco D.9 40w., 3/16 in. bit,	34/0
Birco D.8 60w., 3/8 in. bit,	40/0
Birco D.1 80w., ½ in. bit,	47/6
Ersin multicore solder 40 tin-60 lead 12/6 1 lb. reel	
Ersin multicore solder 60 tin-40 lead 14/0 1 lb. reel	
Coraline 2 oz. tin sold. paste, 2/9	

15 Ohm Woofer—Tweeter Comb. A.W.A. 20928 12 in. Woofer,	£6/6/0
A.W.A. 20766 6 in. Tweeter,	£2/9/6

Call in and see our Mr. SAM HURREY. Let him solve your HI-FI problems for you! We are Suppliers of LEAK, QUAD, ARMSTRONG, and WILLIAMSON (etc., etc.) equipment.

HI-FIDELITY ELECTROSTATIC TWEETERS
Available now.
Price on application.

JABEL ROTARY WAVE CHANGE SWITCHES

1 x 12 x 1	14/4 ea.
2 x 6 x 1	14/4 ea.
4 x 2 x 1	14/4 ea.
4 x 3 x 1	14/4 ea.

OAK ROTARY WAVE CHANGE SWITCHES

1 x 11 x 1	11/10
1 x 11 x 2	18/4
1 x 11 x 3	25/7
1 x 12 x 1	18/10
1 x 12 x 2	28/10
1 x 12 x 3	31/4
2 x 4 x 3	34/10
2 x 5 x 1	11/7
2 x 5 x 2	17/10
2 x 5 x 3	24/10
3 x 3 x 1	11/7
3 x 3 x 2	17/10
3 x 3 x 3	24/10
4 x 2 x 1	11/7
4 x 3 x 2	17/10
4 x 2 x 3	24/10
5 x 2 x 1	18/10
5 x 2 x 2	25/10
6 x 2 x 3	31/4

RECORDING TAPE

BASF 1200 7 in. reels	67/0
BASF 1200 5 in. reels	65/0
BASF 1700 7 in. reels	95/0
Collaro Hi-Fi 1200 7 in. reels	70/0
Philips 1800 ft. 7 in. reels	95/0
Scotch 300 ft. 5 in. reels	28/0
Scotch 600 ft. 5 in. reels	45/0
Scotch 1200 ft. reels	70/0
Westinghouse 1200 ft. 7 in. reels	62/0

TEST EQUIPMENT

Advance G1 signal gen.	£76/9/8
Telecheck and marker generator	£158/17/6
Palec MX47 20,000 ohms per volt multiplier	£30/15/0
Palec M32 10,000 ohms per volt multimeter	£17/18/0
Palec ET4A valve tester	£37/15/0
University TVR-EV electronic volt meter	£40
University TV30 30kv. probe for TVR-EV	£8/5/0
University TV5 crystal RF probe for TVR-EV	£5/5/0
University TV7 valve RF probe for TVR-EV	£7/5/0
University TVR-PG pattern generator	£60
University B.T.B. dry battery tester	£10/10/0
University U.B.A. uniscope (resistance and capacitance tester)	£34
University MVA2 AC/DC multimeter	£17/10/0
G.R.A. de luxe test leads	10/8
Jabel probes	10/8
Westinghouse meter rectifier 5 mA.	35/0
Westinghouse meter rectifier 1 mA.	35/0

(All prices subject 12½% tax.)

SOCKET PUNCHES

(Hammer or screw type)

1—3/16 Std.	43/4
1 in. Carr octal	30/4
3/4 in. Inoval	30/3
5/8 in. button case	23/3
½ in. for pots, bezels, etc.	23/3
"BIB" wire strippers	6/9

L.T. 53 Westinghouse 6/12v. 3a. battery charger rectifiers 70/0

290 LONSDALE STREET, MELBOURNE FB 3711